HUGHES AIRCRAFT Co 719728-1

REV.	RELEASE DATE
ORIG. RELEASE	1977, MAR 29
A	(Rev'd 1983, FEB 14)
B	10-6-83
C	12-20-86

PURCHASE ORDER

Parko
ELECTRONICS COMPANY, Inc.
16722 Milliken Avenue, Irvine, California 92714 • 714/549-8301

12746

THE ORDER NUMBER AT RIGHT MUST APPEAR ON ALL CORRESPONDENCE, INVOICES AND PACKAGES. SEND SEPARATE INVOICES IN DUPLICATE FOR EACH ORDER NUMBER. TIME IS OF THE ESSENCE IN THE PERFORMANCE OF THIS ORDER.

ISSUE TO: PACIFIC POWER SOURCE CORPORATION
15[illegible] BOLSA CHICA
HUNTINGTON BEACH, CA 92649

898-2619

NON-CONFIRMING ☐
CONFIRMING ☒

ORDER DATE	CONTRACT NO.	S.O NO.	IN OUR PLANT: DELIVERY REQUIRED	IN OUR PLANT: DELIVERY PROMISED	CONFIRMED BY	ACCT. NO.
6-26-86	RENEGOTIABLE YES ☐ NO ☐	FFP	SOONEST	7-10-86	JOE ARRANGO	183

SHIP VIA	F.O.B.	TERMS	CERTIFICATION REQUIRED	TAXABLE
BEST WAY/COLLECT	ORIGIN	N30	☐ YES NO ☐	YES ☒ NO ☐ RESALE NO. EA-149088

ITEM	QUANTITY	PART NUMBER	DESCRIPTION	UNIT PRICE	AMOUNT
1.	1	PA250	POWER AMPLIFIER	500.00	$500.00
			TE-1184-1	+	T/30.47
					530.47

Inventory
Say for
Connie

ENGR. H. R. Krivka APP'VD BY _____ Q.C. C. Ortiz

H. R. KRIVKA C. ORTIZ

THIS ORDER IS SUBJECT TO THE TERMS AND CONDITIONS SHOWN ON FACE, REVERSE SIDE AND ATTACHMENTS (IF ATTACHED) HEREOF. ACCEPTANCE OF THIS ORDER IS REQUIRED ON ACKNOWLEDGMENT COPY ATTACHED.

ACCOUNTING COPY

Linda: This is what I think you wanted and what is in the box:

PARTS:

4 cans, 22 covers with holes and studs, 27 headers, 34 pc boards, 1 60073 transformer, 100 labels, 31, 3319H-1-102 (1K) pots, Resistors (R20), 73, 3329H-1-502 pots resistor (R14).

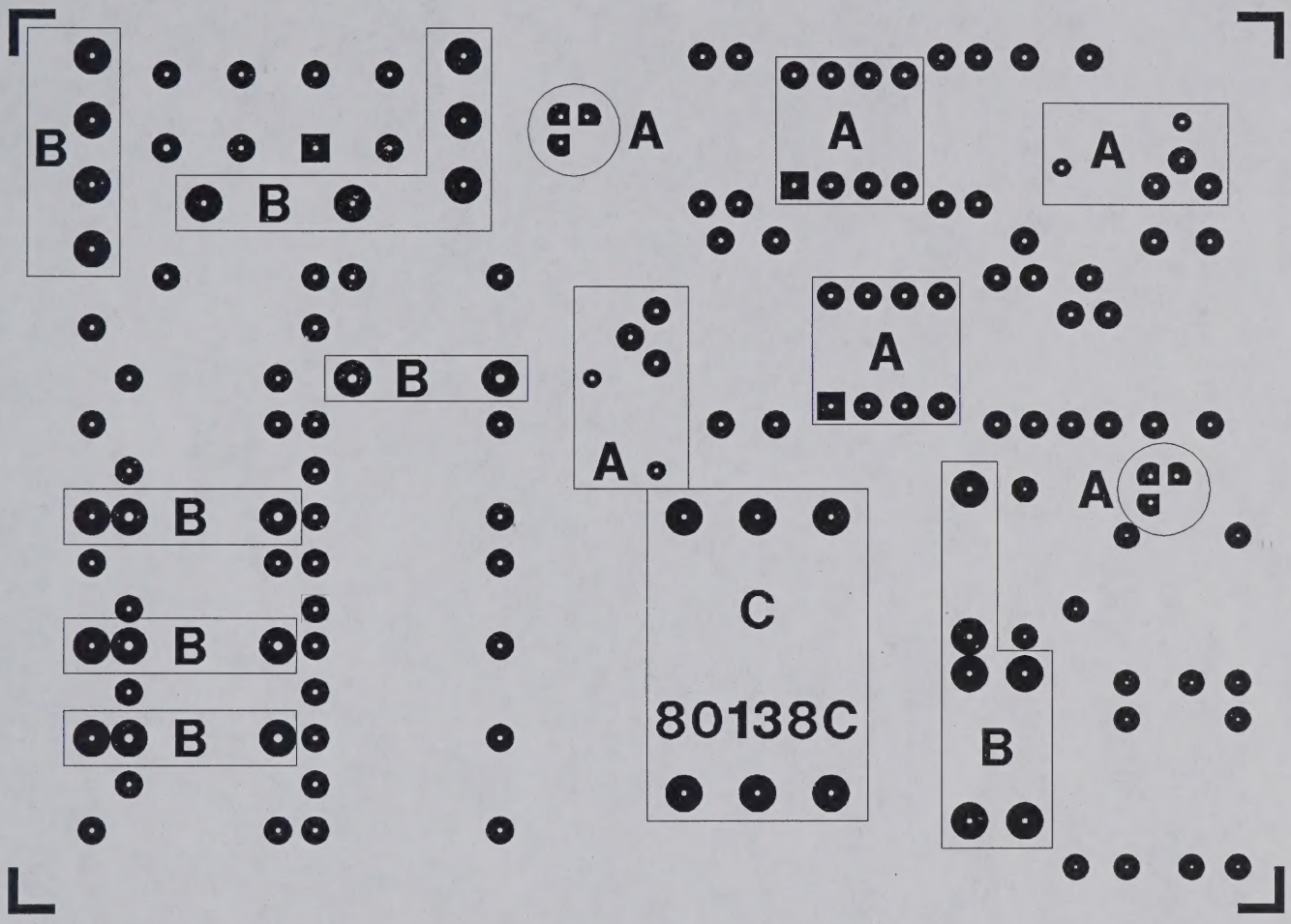
DRAWINGS:

Original Hughes Aircraft Specification Control Drawing No, 719728

Parko Top Drawing No, 101535. Parko Schematic No. 101536. Parko Assembly Drawing No. 101537. Parko Parts List No. PL 101535. Parko Pc Board Drawing No.80138.

Can and Cover Modification Drawing No.20117. Label Drawing No. 90615.

Test Procedures: Engineering Specification No. ES 1535A



6. FINAL BOARD DIMENSIONS 3.40 X 2.40
5. ALL HOLES 0.035 EXCEPT:
   "A" (32) 0.025
   "B" (26) 0.046
   "C" (6) 0.055
4. ALL HOLE DIMENSIONS AFTER PLATING.
3. ALL HOLES PLATED THRU.
2. SOLDER PLATE AND FUSE.
1. MATERIAL: 0.047 GLASS EPOXY, 2 OZ COPPER

NOTES:

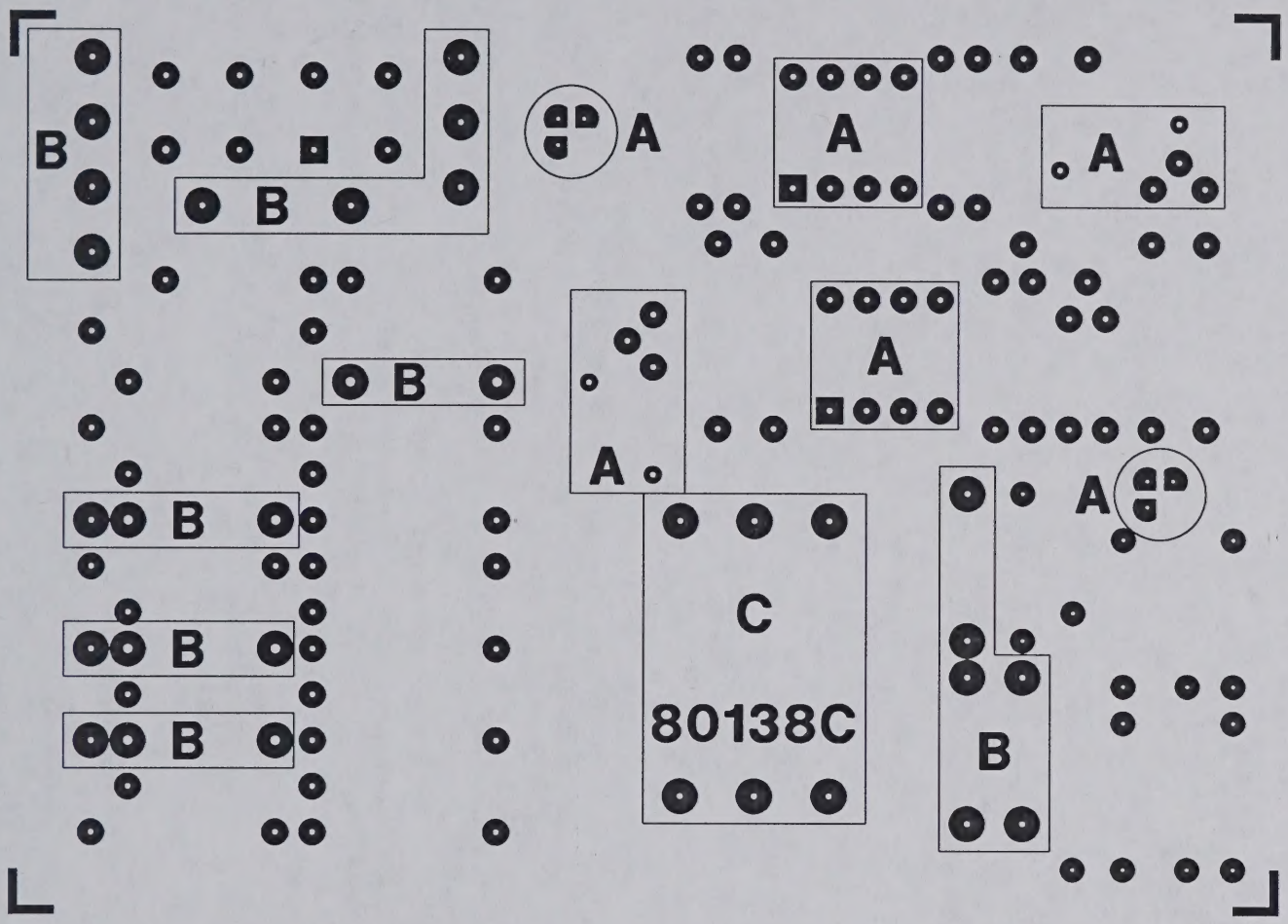
TOLERANCES: .X +/- 0.1 .XX +/- 0.03 .XXX +/- 0.010 ANGLES +/- 0.5°	DRAWN: F. PARKER CHECK: G. LUCAS RELEASE: 05-10-95 APPRVD: F. PARKER APPRVD:

TOP DRAWING	101535
PARTS LIST	PL101535
SCHEMATIC DRAWING	101536
ASSEMBLY DRAWING	101537

Parko *ELECTRONICS CO. INC.*
SANTA ANA, CA **CAGE CODE 13979**

PC BOARD
O/U ACV SENSING RELAY

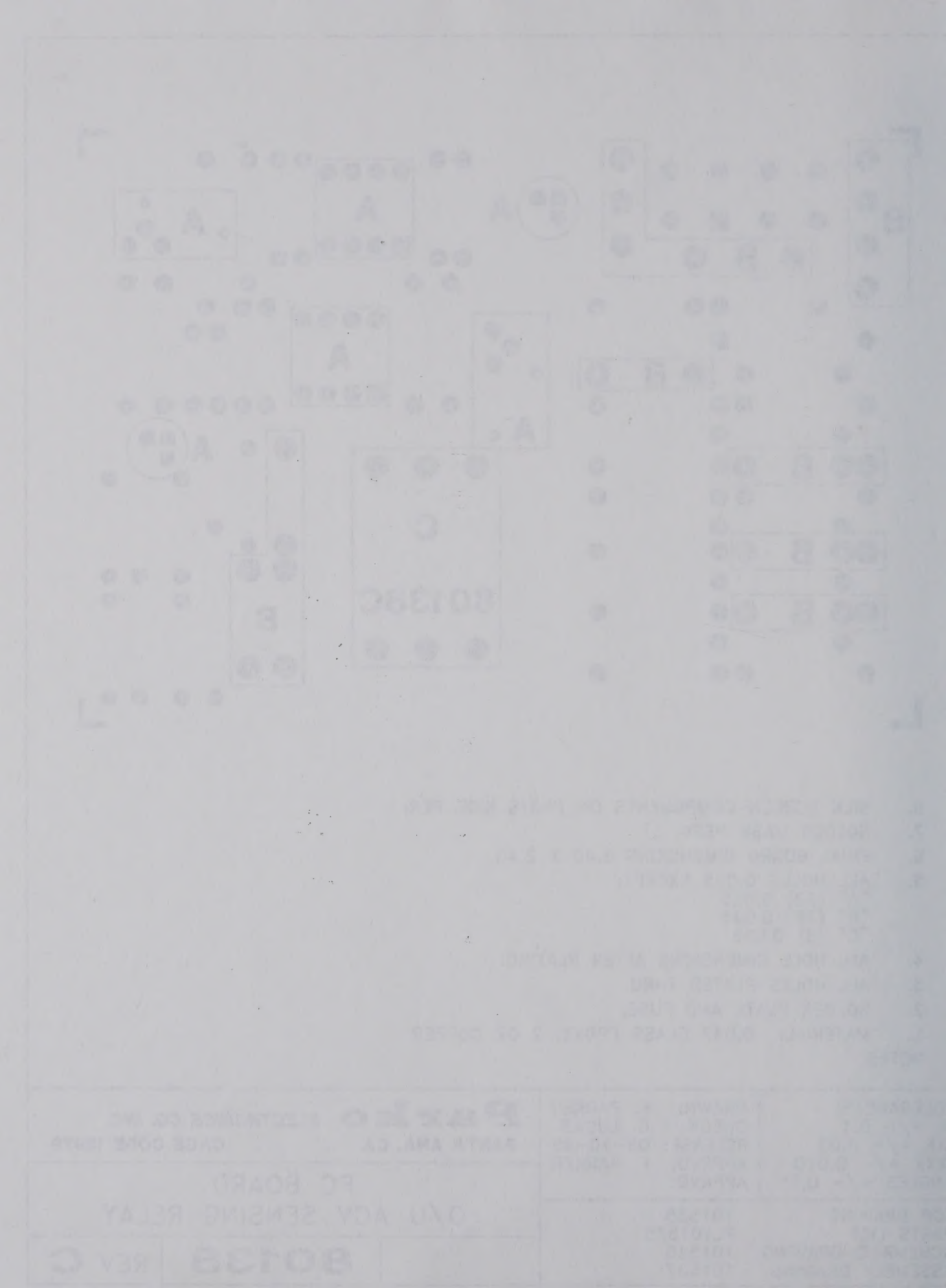
80138 REV **C**

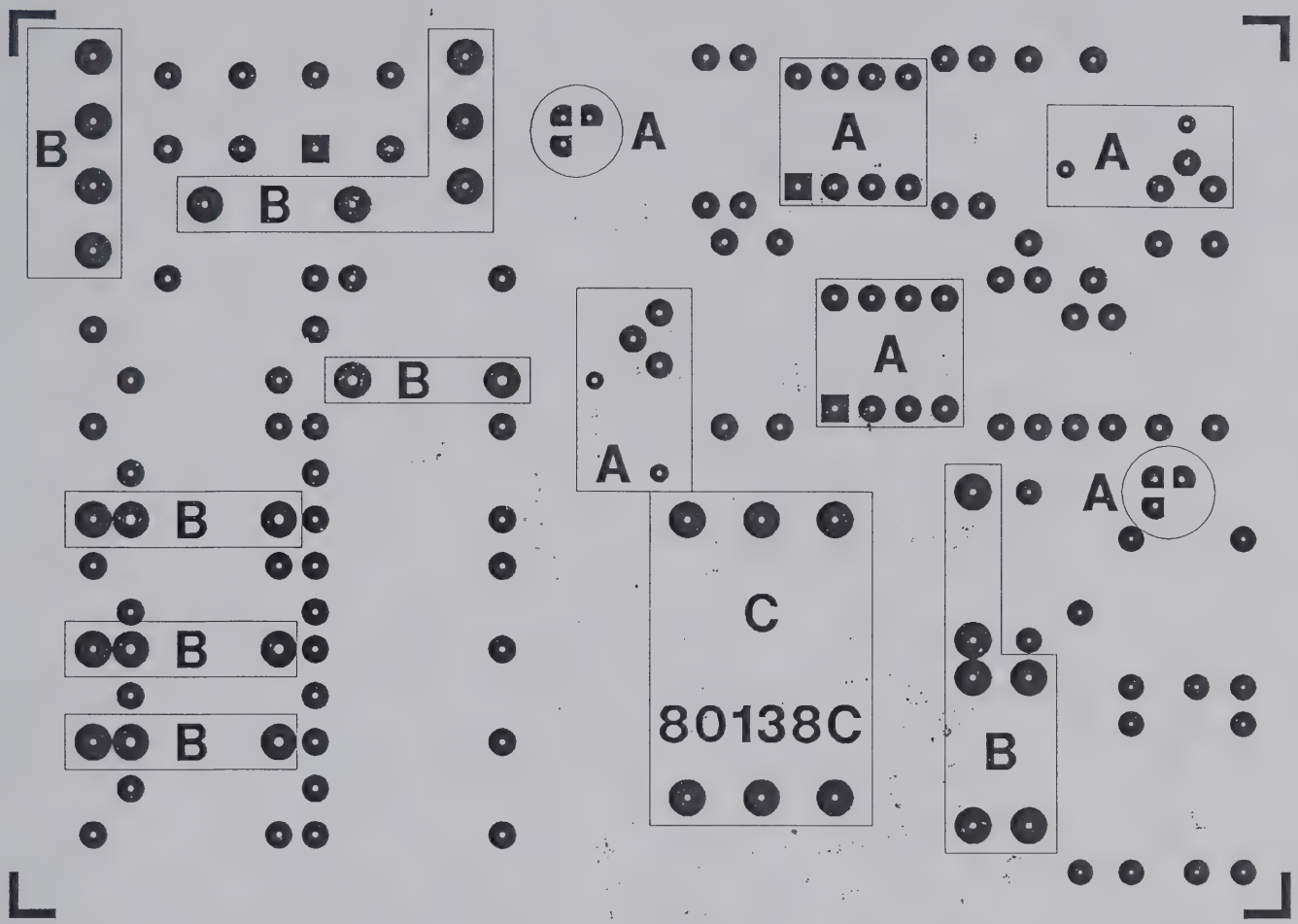


8. SILK SCREEN COMPONENTS ON PARTS SIDE PER:
7. SOLDER MASK PER:
6. FINAL BOARD DIMENSIONS 3.40 X 2.40
5. ALL HOLES 0.035 EXCEPT:
   "A" (32) 0.025
   "B" (26) 0.046
   "C" (6) 0.055
4. ALL HOLE DIMENSIONS AFTER PLATING.
3. ALL HOLES PLATED THRU.
2. SOLDER PLATE AND FUSE.
1. MATERIAL: 0.047 GLASS EPOXY, 2 OZ COPPER

NOTES:

TOLERANCES: .X +/- 0.1 .XX +/- 0.03 .XXX +/- 0.010 ANGLES +/- 0.5°	DRAWN: F. PARKER CHECK: G. LUCAS RELEASE: 05-10-95 APPRVD: F. PARKER APPRVD:	**Parko** *ELECTRONICS CO. INC.* **SANTA ANA, CA** **CAGE CODE 13979**
TOP DRAWING 101535 PARTS LIST PL101535 SCHEMATIC DRAWING 101536 ASSEMBLY DRAWING 101537		PC BOARD O/U ACV SENSING RELAY
		80138 REV **C**





6. FINAL BOARD DIMENSIONS 3.40 X 2.40
5. ALL HOLES 0.035 EXCEPT:
   "A" (32) 0.025
   "B" (26) 0.046
   "C" (6) 0.055
4. ALL HOLE DIMENSIONS AFTER PLATING.
3. ALL HOLES PLATED THRU.
2. SOLDER PLATE AND FUSE.
1. MATERIAL: 0.047 GLASS EPOXY, 2 OZ COPPER

NOTES:

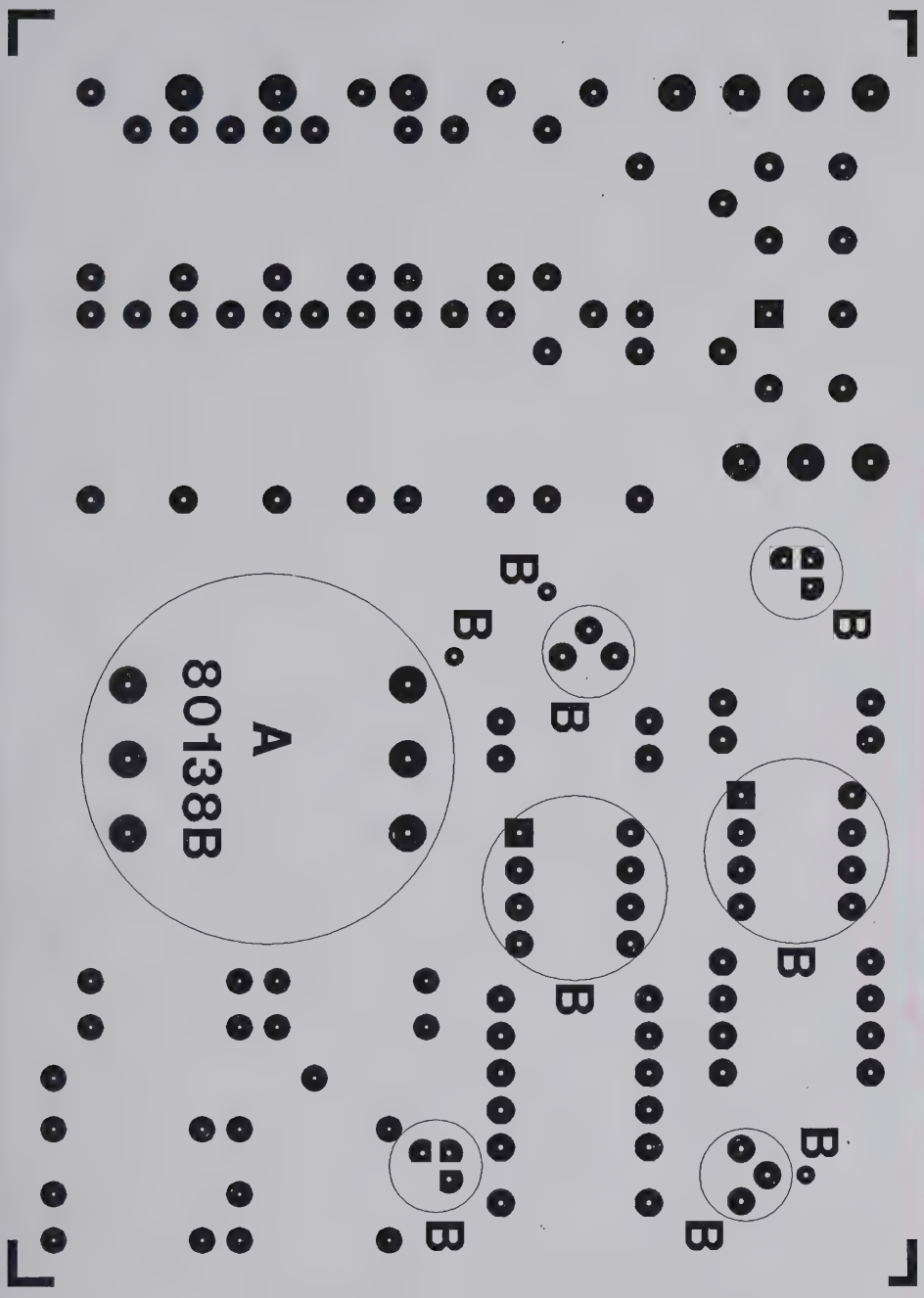
TOLERANCES: .X +/- 0.1 .XX +/- 0.03 .XXX +/- 0.010 ANGLES +/- 0.5°	DRAWN: F. PARKER CHECK: G. LUCAS RELEASE: 05-10-95 APPRVD: F. PARKER APPRVD:

TOP DRAWING	101535
PARTS LIST	PL101535
SCHEMATIC DRAWING	101536
ASSEMBLY DRAWING	101537

Parko *ELECTRONICS CO. INC.*
SANTA ANA, CA **CAGE CODE 13979**

PC BOARD
O/U ACV SENSING RELAY

80138 REV **C**



Needs New Drill tape

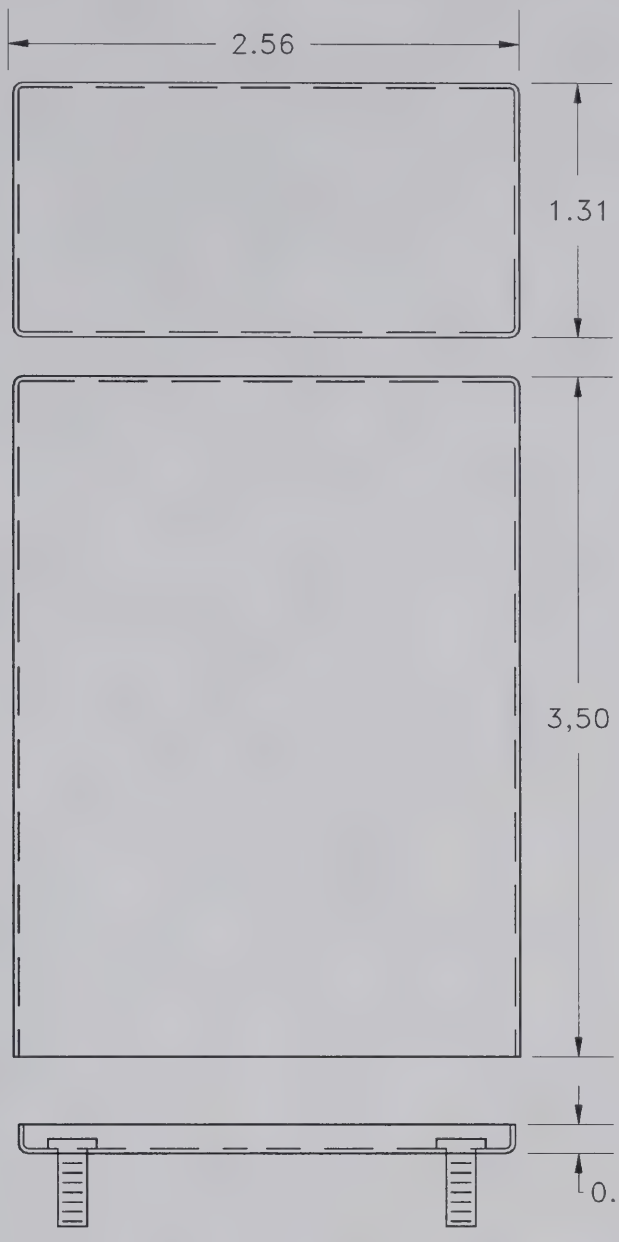
Final Board Size 2.4 X 3.4

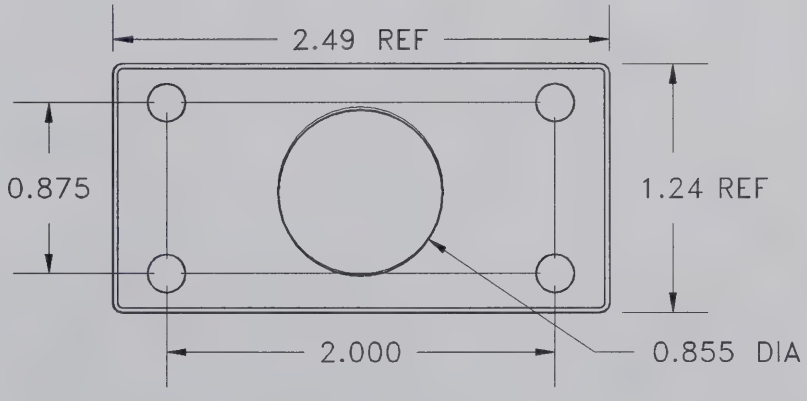
NOTES:

1. TOP DRAWING: 101535
2. MATERIAL: .032: GLASS EPOXY, 2 OZ. COPPER CIRCUIT
3. SOLDER PLATE AND FUSE ALL CIRCUITRY,
4. HOLES PLATED THRU
5. DRILL ALL HOLES .035 DIA AFTER PLATING EXCEPT AS NOTED:
   "B" HOLES .025 DIA AFTER PLATING
   "A" HOLES .046 DIA AFTER PLATING

80138 B

3/14/94





4. STUDS: (4) PEM TFHS-632-6
3. COVER TO FIT IN CAN WITH APPROX 0.01 CLEARANCE
2. FINISH: BRIGHT ELECTRO-TIN FUSED PER MIL-T-10727A TYPE II MASK SS STUDS
1. CAN AND COVER MATERIAL, 0.025 CRS

NOTES:

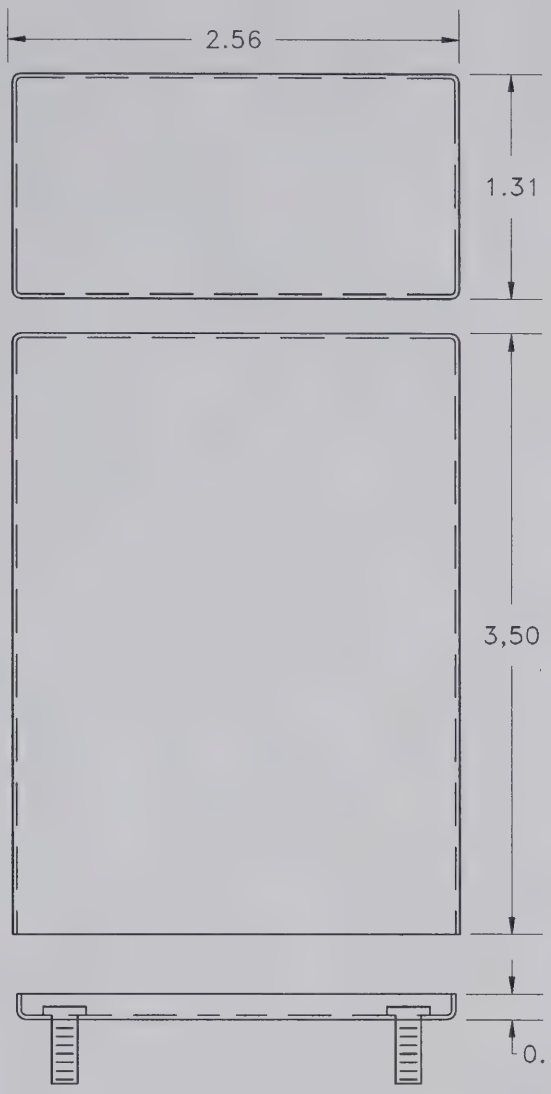
TOLERANCES: .X +/- 0.1 .XX +/- 0.03 .XXX +/- 0.010 ANGLES +/- 0.5°	DRAWN: F. PARKER CHECK: G. LUCAS RELEASE: 03-10-98 APPRVD: F. PARKER APPRVD:

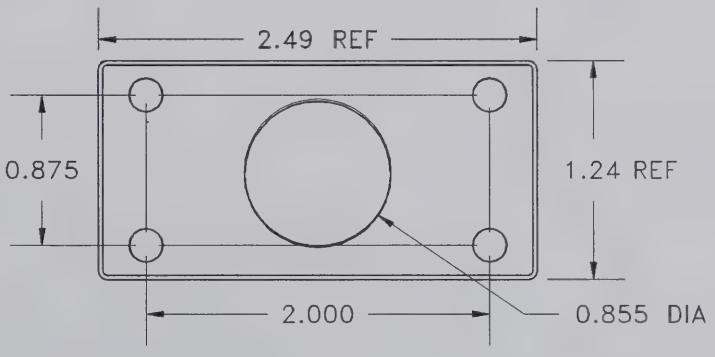
TOP DRAWING	101535
PARTS LIST	
SCHEMATIC DRAWING	101536
PC BOARD DRAWING	101537

Parko *ELECTRONICS CO. INC.*
SANTA ANA, CA **CAGE CODE 13979**

ENCLOSURE
AC POWER MONITOR

SCALE N/A	**20117**	**REV A**





4. STUDS: (4) PEM TFHS-632-6
3. COVER TO FIT IN CAN WITH APPROX 0.01 CLEARANCE
2. FINISH: BRIGHT ELECTRO-TIN FUSED PER MIL-T-10727A TYPE II MASK SS STUDS
1. CAN AND COVER MATERIAL, 0.025 CRS

NOTES:

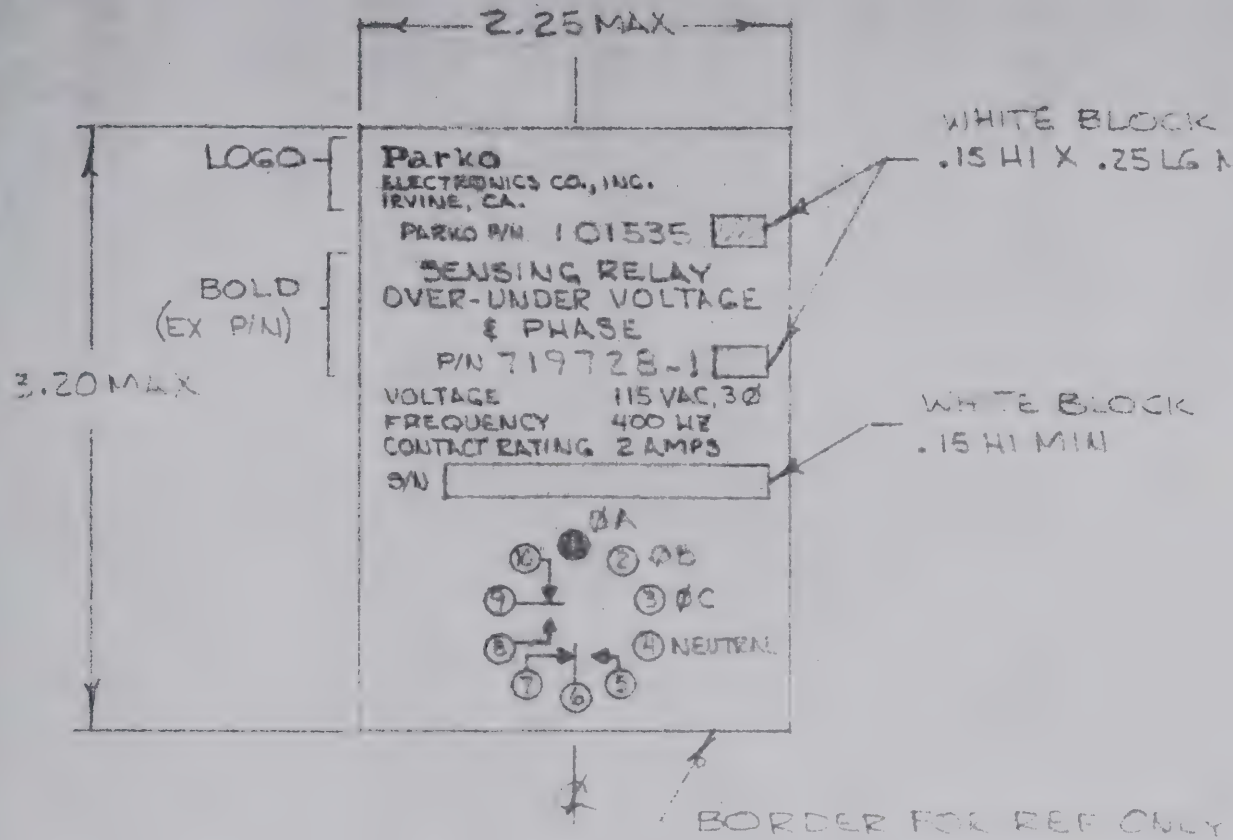
TOLERANCES: .X +/- 0.1 .XX +/- 0.03 .XXX +/- 0.010 ANGLES +/- 0.5°	DRAWN: F. PARKER CHECK: G. LUCAS RELEASE: 03-10-98 APPRVD: F. PARKER APPRVD:

TOP DRAWING	101535
PARTS LIST	
SCHEMATIC DRAWING	101536
PC BOARD DRAWING	101537

Parko *ELECTRONICS CO. INC.*
SANTA ANA, CA **CAGE CODE 13979**

ENCLOSURE
AC POWER MONITOR

SCALE N/A	**20117**	**REV A**



4 TOP DRAWING: 101535

3 KISS CUT IN VERTICAL STRIPS

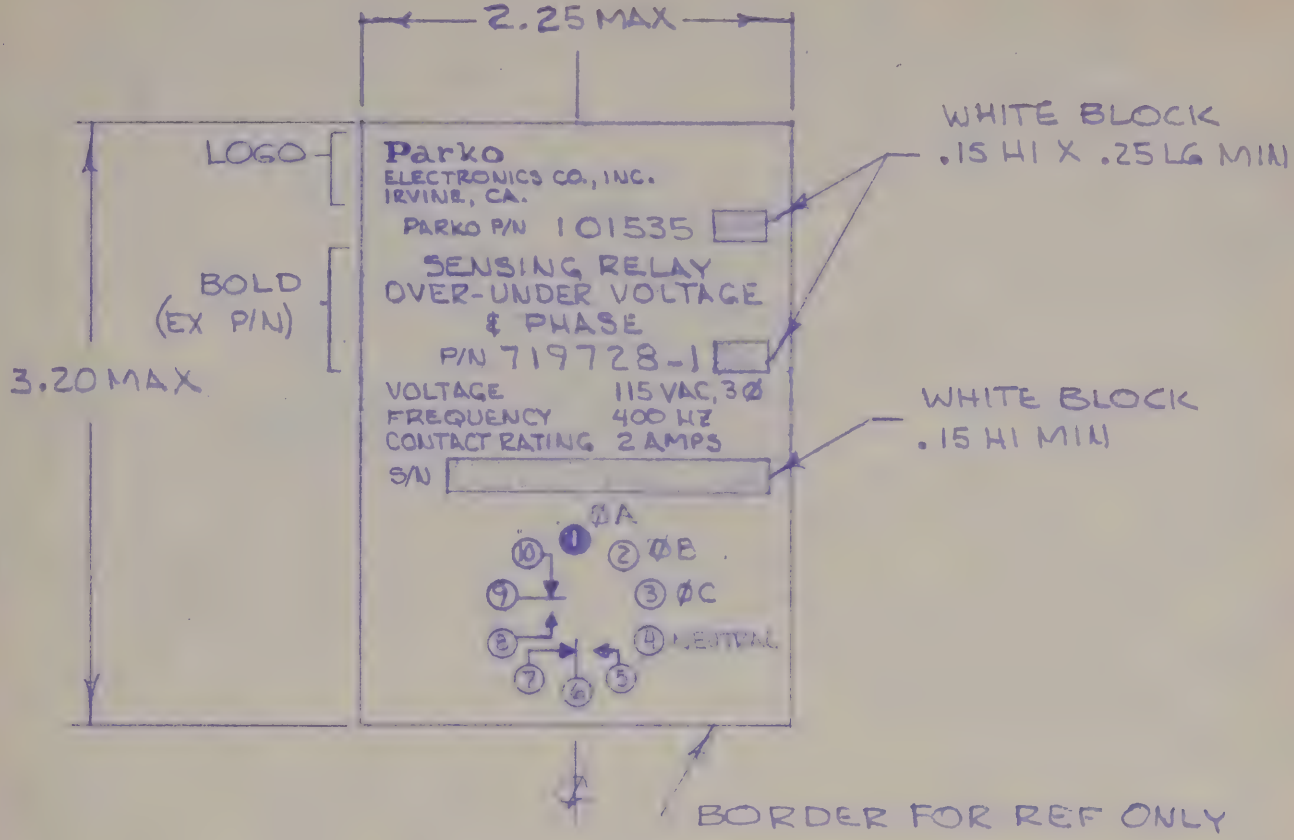
2 MARKING: WHITE PRINTING ON DULL BLACK
PER MIL-M-13231A, AMEND 2, GRP I

1 MATERIAL: ~~[illegible]~~

NOTES:

FLEXCON #41106 4 MIL WHITE VINYL PER MIL-M-43719B, AMEND 1, TYPE 1, CLASS I

DIMENSIONS ARE IN INCHES AND AFTER PLATING	DR [signature]	6-14-77	Parko ELECTRONICS COMPANY INC., SANTA ANA, CALIF.
TOLERANCES (unless otherwise specified) .X ±.1 .XX ±.03 .XXX±.010 ANGLES±0.5°	CHK [signature]	6-14-77	LABEL - SENSING RELAY
	DSGN		
	PROJ		
MACH SURF ✓	REL [signature]	6-14-77	
	APPROVED		CODE IDENT NO. 13979 / SIZE A / 90615 / REV
	APPROVED		
	DO NOT SCALE DRAWING		SCALE 1:1 / SHEET 1 OF 1



4 TOP DRAWING: 101535

3 KISS CUT IN VERTICAL STRIPS

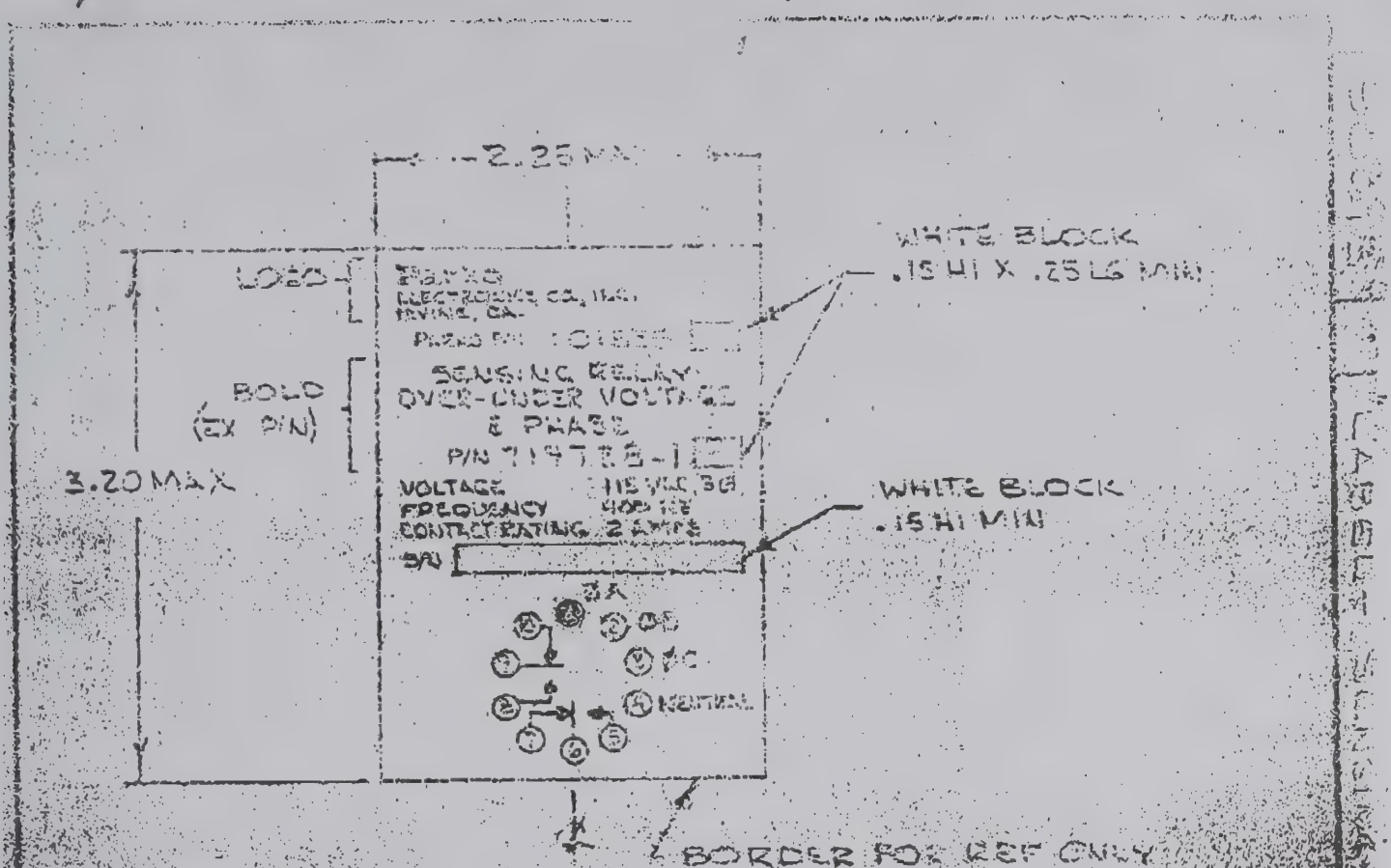
2 MARKING: WHITE PRINTING ON DULL BLACK PER MIL-M-13231A, AMEND 3, GRP I

1 MATERIAL: SCOTCHCAL # 3650 PER MIL-F-8799A, MIL-D-8634B, MIL-D-8635A & MIL-P-6906

NOTES.

DIMENSIONS ARE IN INCHES AND AFTER PLATING	DR	6-14-77	Parko ELECTRONICS COMPANY INC. SANTA ANA, CALIF	
TOLERANCES (unless otherwise specified) .X ±.1 .XX ±.03 .XXX ±.010 ANGLES ±0.5	CHK	6-14-77	LABEL - SENSING RELAY	
	DSGN			
	PROJ			
MACH SURF ✓	REL	6-14-77		
	APPROVED		CODE IDENT NO. 13979	SIZE A
	APPROVED		30615	REV
	DO NOT SCALE DRAWING		SCALE 3/1	SHEET 1 OF 1

30615 LABEL SENSING RELAY



4 TOP DRAWING: 101535

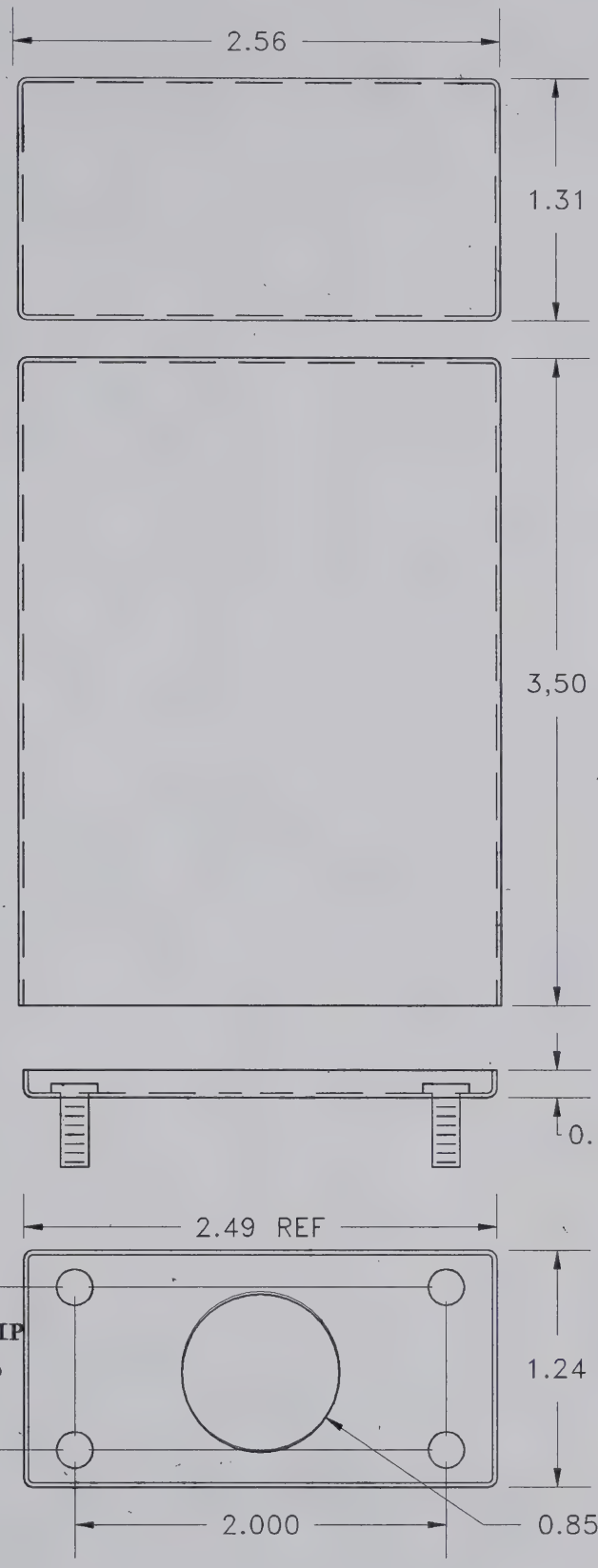
3 KISS CUT IN VERTICAL STRIPS

2 MARKING: WHITE PRINTING ON DULL BLACK PER MIL-M-13231A, AMEND 2, GRP I

1 MATERIAL: ~~[illegible]~~ FLEXCON #41104, 4 MIL WHITE VINYL PER MIL-M-43719B, AMEND 1, TYPE 1, CLASS 1

NOTES:

DIMENSIONS ARE IN INCHES AND AFTER PLATING	DR	6-17-77	Parlec ELECTRONICS COMPANY INC. SANTA ANA, CALIF.		
TOLERANCES (unless otherwise specified) X ±.1 XX ±.03 XXX±.010 ANGLES±0.5°	CHK	6-17-77	LABEL SENSING RELAY		
	DSGN				
	PRO				
	REL	6-17-77			
MACH SURF	APPROVED		CODE IDENT NO. 13979	SIZE A	90615 REV A
	APPROVED				
	DO NOT SCALE DRAWING		SCALE 1:1		SHEET 1 OF 1



4. STUDS: (4) PEM TFHS-632-6
3. COVER TO FIT IN CAN WITH APPROX 0.01 CLEARANCE
2. FINISH: BRIGHT ELECTRO-TIN FUSED PER MIL-T-10727 C TYPE II MASK SS STUDS
1. CAN AND COVER MATERIAL, 0.025 CRS

NOTES:

TOLERANCES:	
.X +/- 0.1	DRAWN: F. PARKER
.XX +/- 0.03	CHECK: G. LUCAS
.XXX +/- 0.010	RELEASE: 03-10-98
ANGLES +/- 0.5°	APPRVD: F. PARKER
	APPRVD:

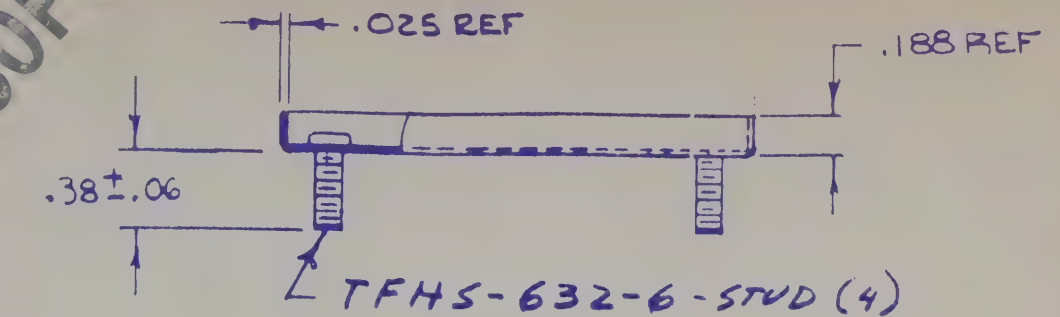
TOP DRAWING	101535
PARTS LIST	
SCHEMATIC DRAWING	101536
PC BOARD DRAWING	101537

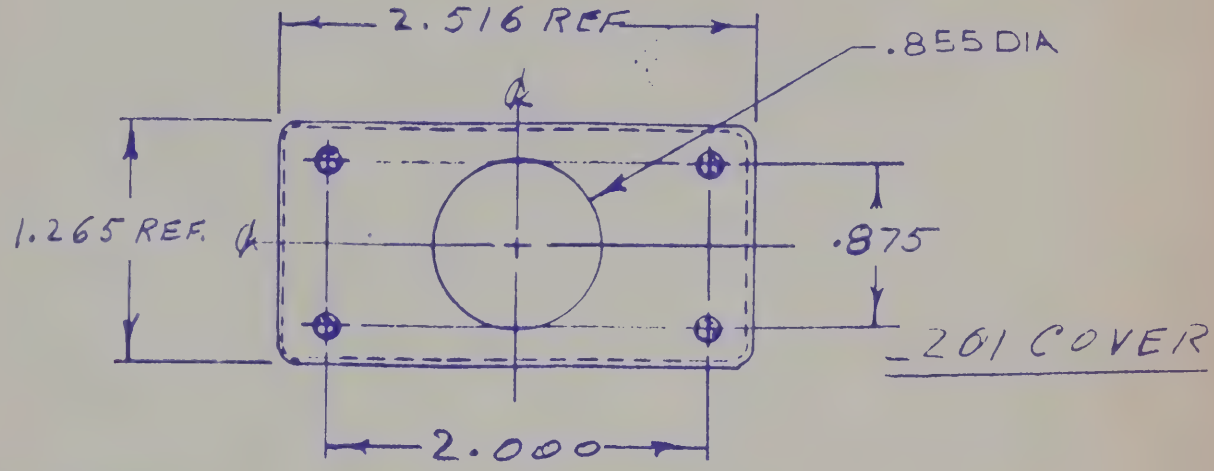
Parko *ELECTRONICS CO. INC.*
SANTA ANA, CA **CAGE CODE 13979**

ENCLOSURE
AC POWER MONITOR

SCALE N/A	**20117**	**REV A**

ENG. COPY





1. TOP DRAWING: 101535
2. PILOT DRILL (5 PLACES) WITH HU-6205 DRILL JIG AND #38 (.1015) COBALT DRILL.
3. DRILL MOUNTING HOLES (4 PLACES) WITH #28 (.1405) COBALT DRILL.
4. PUNCH CENTER HOLE WITH .855 Ø PUNCH.
5. BRIGHT ELECTRO TIN FUSED PER MIL-T-10727A.
6. INSTALL PEM STUDS AND BACK SOLDER.

QTY	DASH No	PART No.	DESCRIPTION
4	—	TFHS-632-6	STUD - PEM
1	-201	HU-6205-CA-ST	COVER HUDSON
1	—	HU-6205-3.500-ST	CAN HUDSON

DIMENSIONS ARE IN INCHES AND AFTER PLATING

TOLERANCES (unless otherwise specified)
.X ±.1
.XX ±.03
.XXX±.010
ANGLES±0.5°
MACH SURF ✓

DR L Lucas 1-8-79
CHK L Lucas 1-8-79
DSGN
PROJ
REL L Potera 1/8/79
APPROVED
APPROVED
DO NOT SCALE DRAWING

Parko
ELECTRONICS COMPANY INC., SANTA ANA, CALIF.

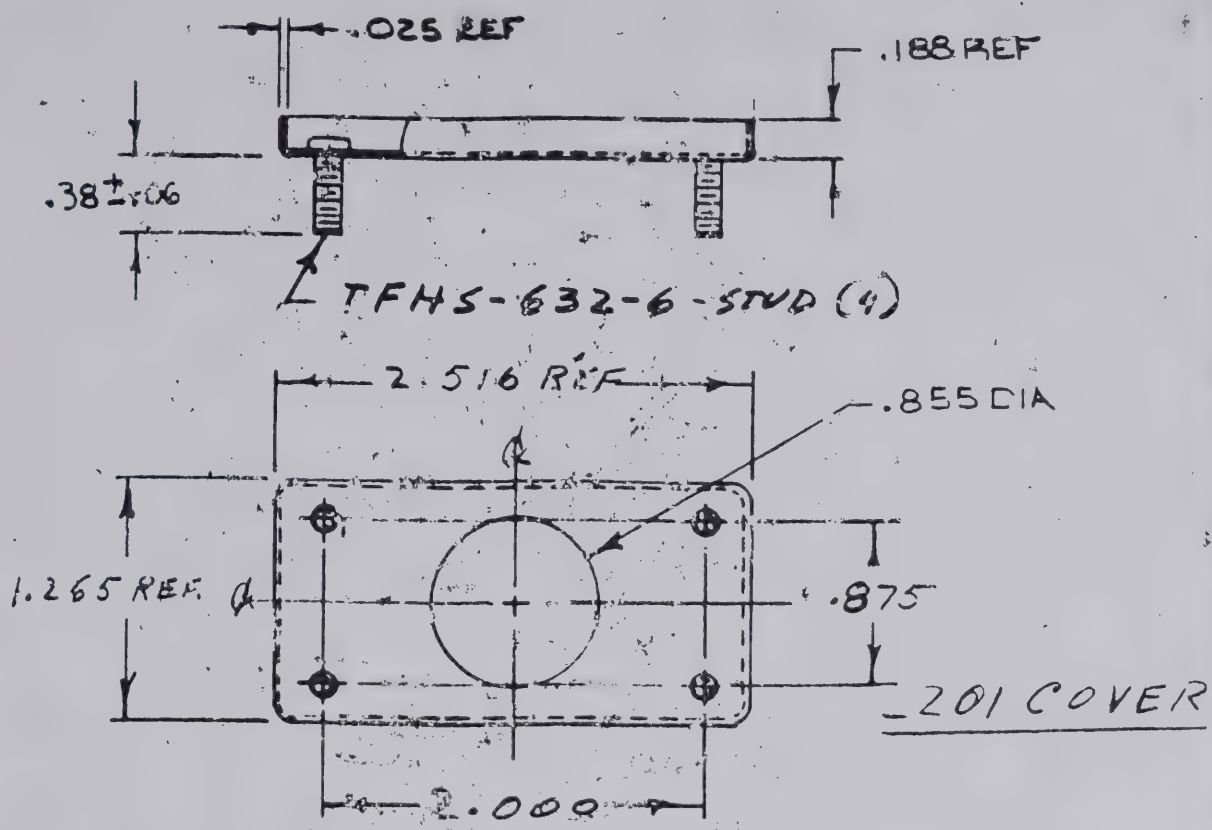
CAN + COVER MODIF
HU-6205

CODE IDENT NO.	SIZE		REV
13979	A	20117	

SCALE NONE | SHEET 1 OF 1

NC1 - 8-5-86

20117 CAN + COVER MODIF - (P/N-101535)



1. TOP DRAWING: 101535
2. PILOT DRILL (5 PLACES) WITH HU-6205 DRILL JIG AND #38 (.1015) COBALT DRILL.
3. DRILL MOUNTING HOLES (4 PLACES) WITH #28 (.1405) COBALT DRILL.
4. PUNCH CENTER HOLE WITH .855 Ø PUNCH.
5. BRIGHT ELECTRO TIN FUSED PER MIL-T-10727A.
6. INSTALL PEM STUDS AND BACK SOLDER.

QTY	DASH NO	PART No.	DESCRIPTION
4	—	TFHS-632-6	STUD — PEM
1	-201	HU-6205-COVER-ST	COVER HUDSON
1	—	HU-6205-3.560-ST	CAN HUDSON

DIMENSIONS ARE IN INCHES AND AFTER PLATING	DR L Lucero	1-8-86
TOLERANCES (unless otherwise specified) .X ±.1 .XX ±.03 .XXX±.010 ANGLES±0.5°	CHK L Lucero	1-8-86
	DSGN	
	PROJ	
	REL L Petersen	1/8/86
	APPROVED	
	APPROVED	
MACH SURF ✓	DO NOT SCALE DRAWING	

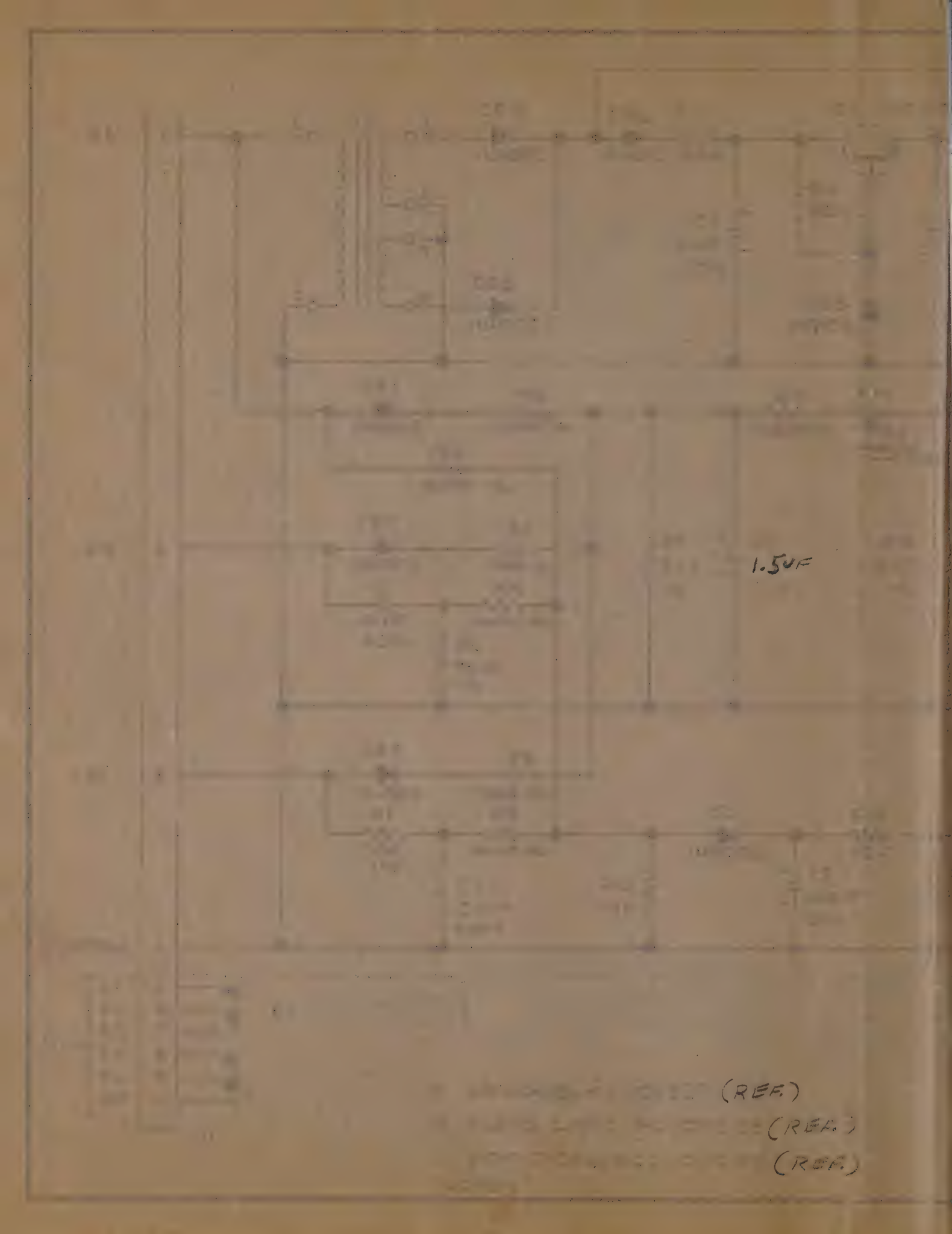
Parko
ELECTRONICS COMPANY INC., SANTA ANA, CALIF.

CAN + COVER MODIF
HU-6205

CODE IDENT NO.	SIZE		REV
13979	A	20117	
		SHEET 1 OF 1	

NC, 1-5-86

20117 | CAN + COVER MODIF - (P/N-101535)


1.5UF
(REF.)
(REF.)
(REF.)

SHEET 1 OF 1

NOTES

1 TOP DRAWING: 101535

2 PARTS LIST: PL101535

3 ASSEMBLY: 101537

DR		6-23-77
CHK		7-25-77
DSGN		
PROJ		
REL		7-25-77

APPROVED

APPROVED

DO NOT SCALE DRAWING

DIMENSIONS ARE IN INCHES AND AFTER PLATING

TOLERANCES (unless otherwise specified)

.X ±.1
.XX ±.03
.XXX±.010
ANGLES±0.5°

MACH SURF

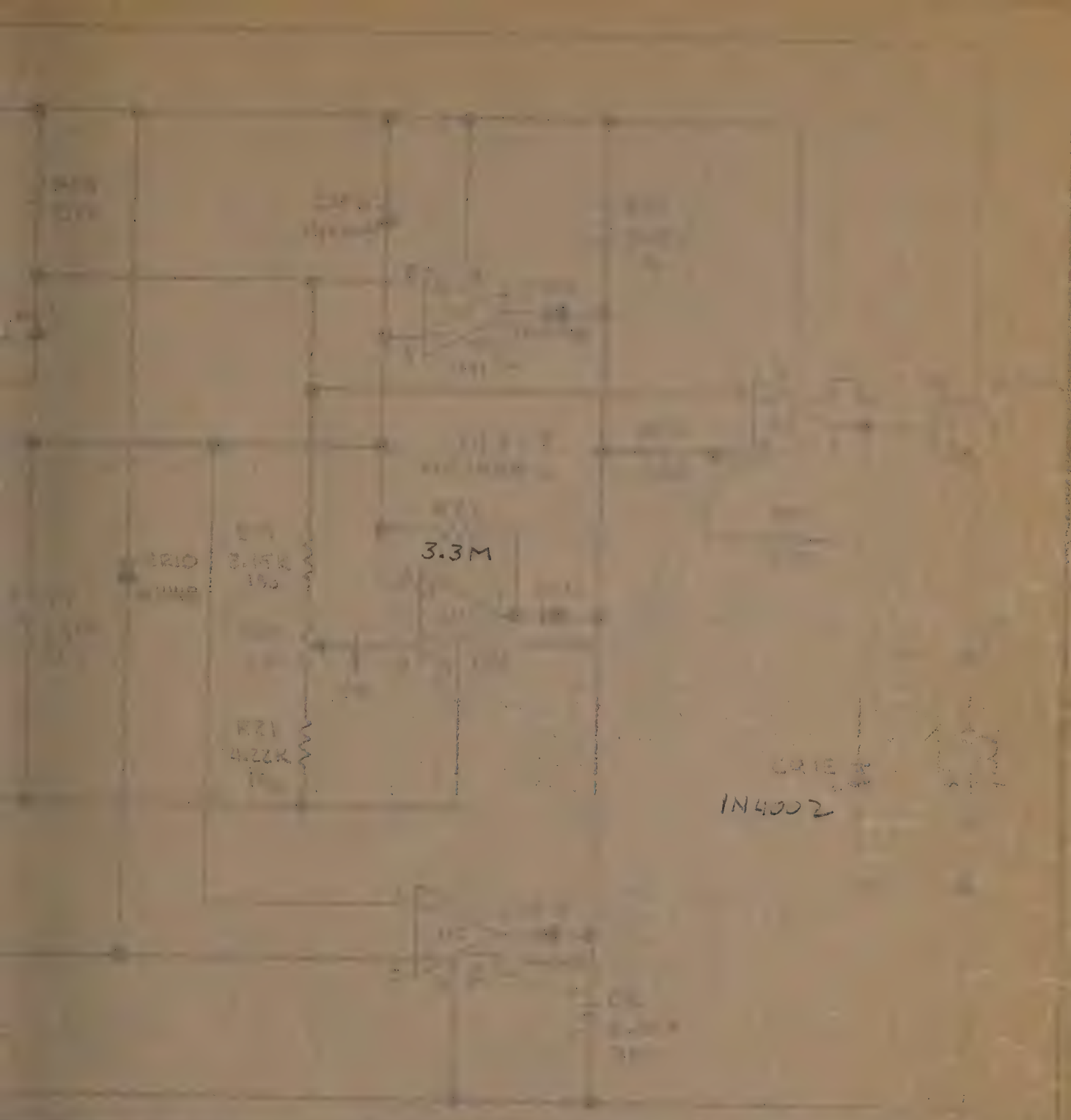
Parko
ELECTRONICS COMPANY INC., SANTA ANA, CALIF.

SCHEMATIC-
SENSING RELAY-
OVER-UNDER VOLTAGE & PHASE

CODE IDENT NO.	SIZE	101536	REV
13979	B		

SCALE — SHEET 1 OF 1

(MAN) SCHEMATIC 101536



SCHEMATIC
SELENIA RELAY
POWER SUPPLY

A

A-8-57

1.5UF

3.3M

IN4002

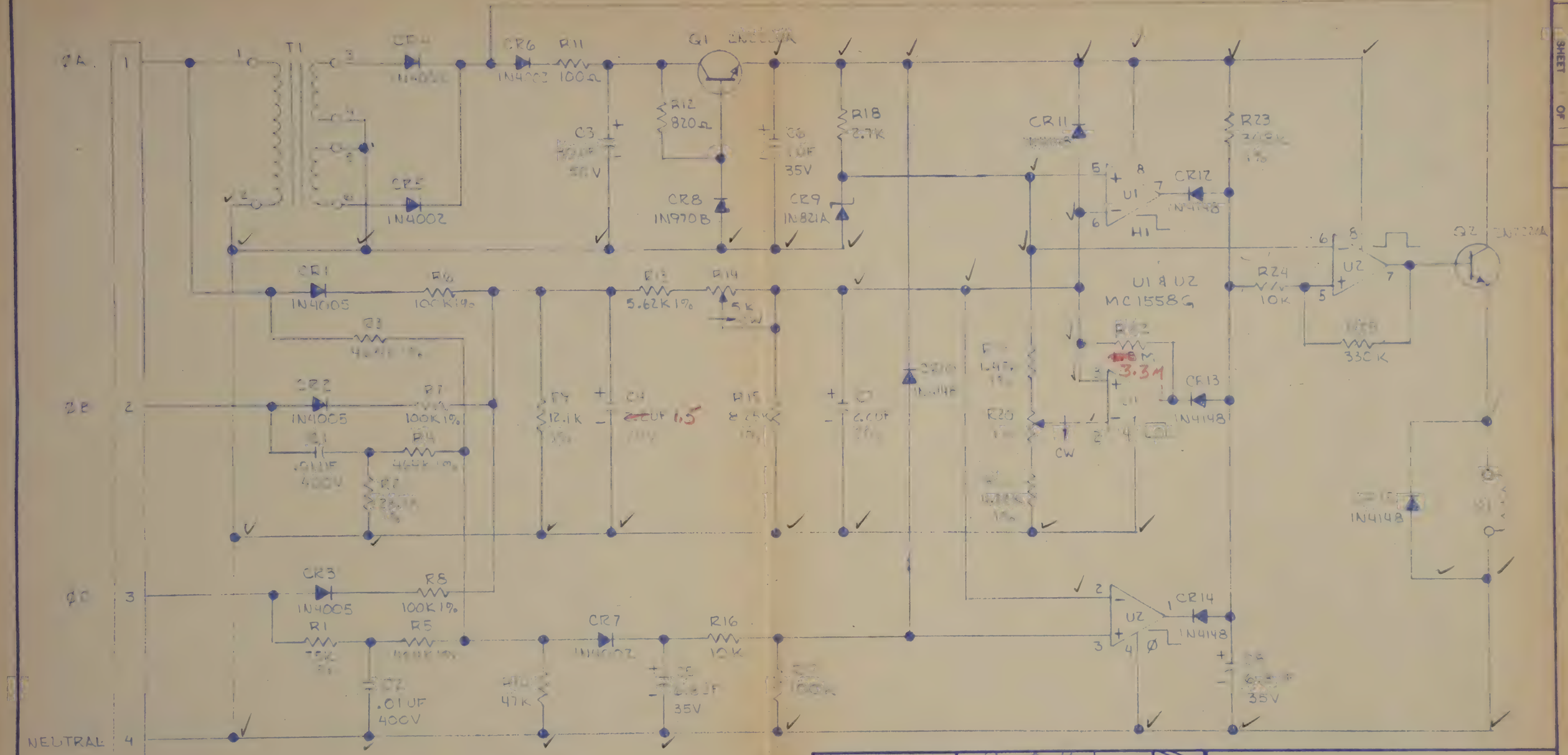
(REF.)

(REF.)

(REF.)

A

A-9-87



3 ASSEMBLY: 101537

2 PARTS LIST: PL101535

1 [illegible]

DIMENSIONS ARE IN INCHES AND AFTER PLATING	DR	6-23-77
TOLERANCES (unless otherwise specified) .X ±.1 .XX ±.03 .XXX±.010 ANGLES±0.5°	CHK	7-25-77
MACH SURF ✓	DSGN	
	PROJ	
	REL	7-25-77
	APPROVED	
	APPROVED	
DO NOT SCALE DRAWING		

Parko
ELECTRONICS COMPANY INC., SANTA ANA, CALIF.

SCHEMATIC-
SENSING RELAY-
OVER-UNDER VOLTAGE & PHASE

CODE IDENT NO.	SIZE		REV
13979	B	101536	

SCALE —

SHEET 1 OF 1

ØA 1 — T1 — CR4 24 IN4002 — CR6 IN4002 — R11 700Ω — Q1 2N2222A

C3 30UF 50V — R12 820Ω — C6 1UF 35V — R18 2.7K — CR8 IN970B 24V — CR9 IN821A 6.3

CR11 IN4148 — U1 — CR12 IN4148 — R23 348K 1% — U1 & U2 MC1558G — U2 — R24 10K — R25 380K — Q2 2N2222A

CR5 IN4002

CR1 IN4005 — R6 100K 1% — R13 5.62K 1% — R14 5K CW

R3 464K 1%

ØB 2 — CR2 IN4005 — R7 100K 1% — C1 .01UF — R4 464K 1% — R9 12.1K 1% — C4 ~~1.8UF~~ 20V 1.5 UF — R15 8.25K 1% — C7 2.7 UF 20V — CR10 IN4148 — R19 2.15K 1% — R20 1K CW — R21 4.22K 1% — R22 ~~3.3K~~ 3.3 — CR13 IN4148 — LOL

R2 23.7K 1%

ØC 3 — CR3 IN4005 — R8 100K 1% — R1 75K 1% — R5 464K 1% — C2 .01 UF 400V — R10 47K — CR7 IN4002 — C5 6.8UF 35V — R16 10K — R17 100K — U2 — CR14 IN4148 — C8 6.8UF 35V

NEUTRAL 4

K1 — A1 A2 A3 B1 B2 B3 — 5 6 7 8 9 10 — K1 — J1

ENG. COPY

3. ASSEMBLY: 101537 (REF)
2. PARTS LIST: PL101535 (REF)
1. TOP DRAWING: 101535 (REF)
NOTES

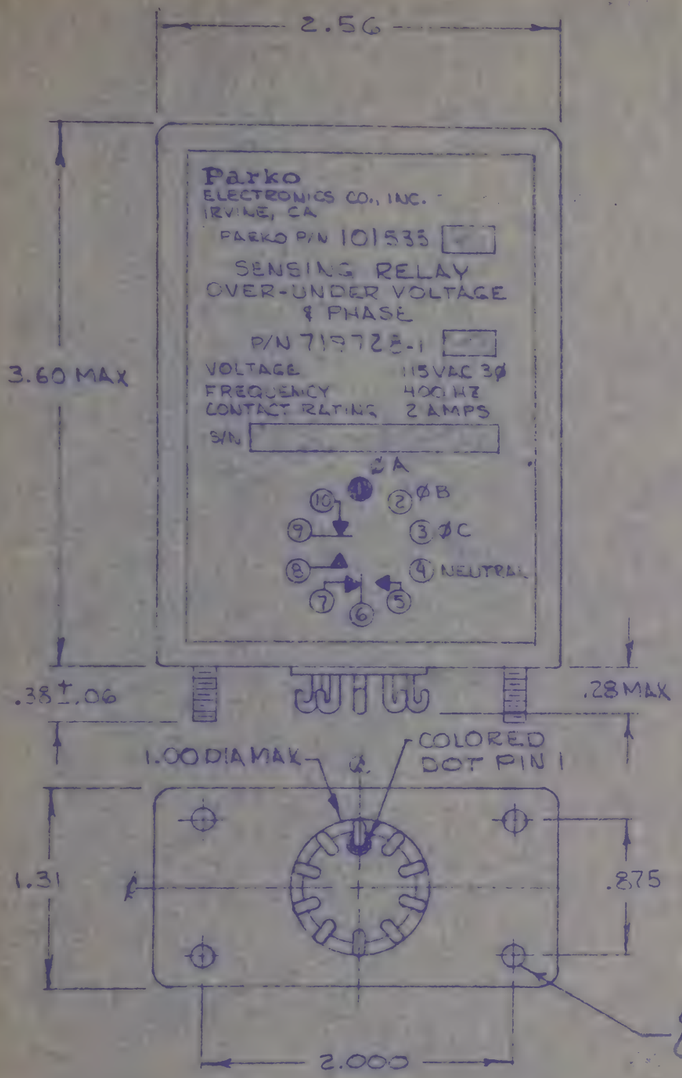
DIMENSIONS ARE IN INCHES AND AFTER PLATING	DR	6-25-71
TOLERANCES (unless otherwise specified) .X ±.1 .XX ±.03 .XXX±.010 ANGLES±0.5°	CHK	7-25-71
MACH SURF √	DSGN	
	PROJ	
	REL	7-28-71
	APPROVED	
	APPROVED	
	DO NOT SCALE DRAWING	

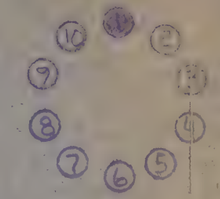
Parko
ELECTRONICS COMPANY INC., SANTA ANA, CALIF.

SCHEMATIC - SENSING RELAY - OVER-UNDER VOLTAGE 1 PHASE

CODE IDENT NO.	SIZE	
13979	B	101535

SCALE – SHEET 1 OF 1





PIN CONNECTIONS

1	ØA
2	ØB
3	ØC
4	NEUTRAL
5	K1-A1 (NO)
6	K1-A2 (ARM)
7	K1-A3 (NC)
8	K1-B1 (NO)
9	K1-B2 (ARM)
10	K1-B3 (NC)

SPECIFICATIONS:

1. INPUT POWER: 115V RMS, 400HZ, 3 PHASE, 4 WIRE SYSTEM. PHASE SEQUENCE: A, B, C.
2. NORMAL OPERATION: RELAY WILL PULL IN ONE SECOND ±10% AFTER APPLICATION OF NOMINAL POWER.
3. OVERVOLTAGE TRIP POINT: 138V RMS. RELAY DROPS OUT.
4. UNDERVOLTAGE TRIP POINT: 92V RMS. RELAY DROPS OUT.
5. OUT OF PHASE SEQUENCE: RELAY DROPS OUT.
6. TRIP POINT STABILITY: ±5% OVER ALL ENVIRONMENTAL CONDITIONS.
7. TRIP POINT DIFFERENTIAL 2% MAXIMUM.
8. CONTACT RATING: PER MIL-R-39016/6
9. TEMPERATURE RANGE: -40°C to +85°C.
10. SHOCK: 50G FOR 11MS.
11. VIBRATION: 20G, 10-2000HZ.
12. INSULATION RESISTANCE: 100 MEGOHMS MINIMUM AT 500VDC. ALL PINS TO CASE.
13. DIELECTRIC STRENGTH: 1000V RMS, 60HZ MINIMUM. ALL PINS TO CASE.
14. CUSTOMER PART NO.: 719728-1

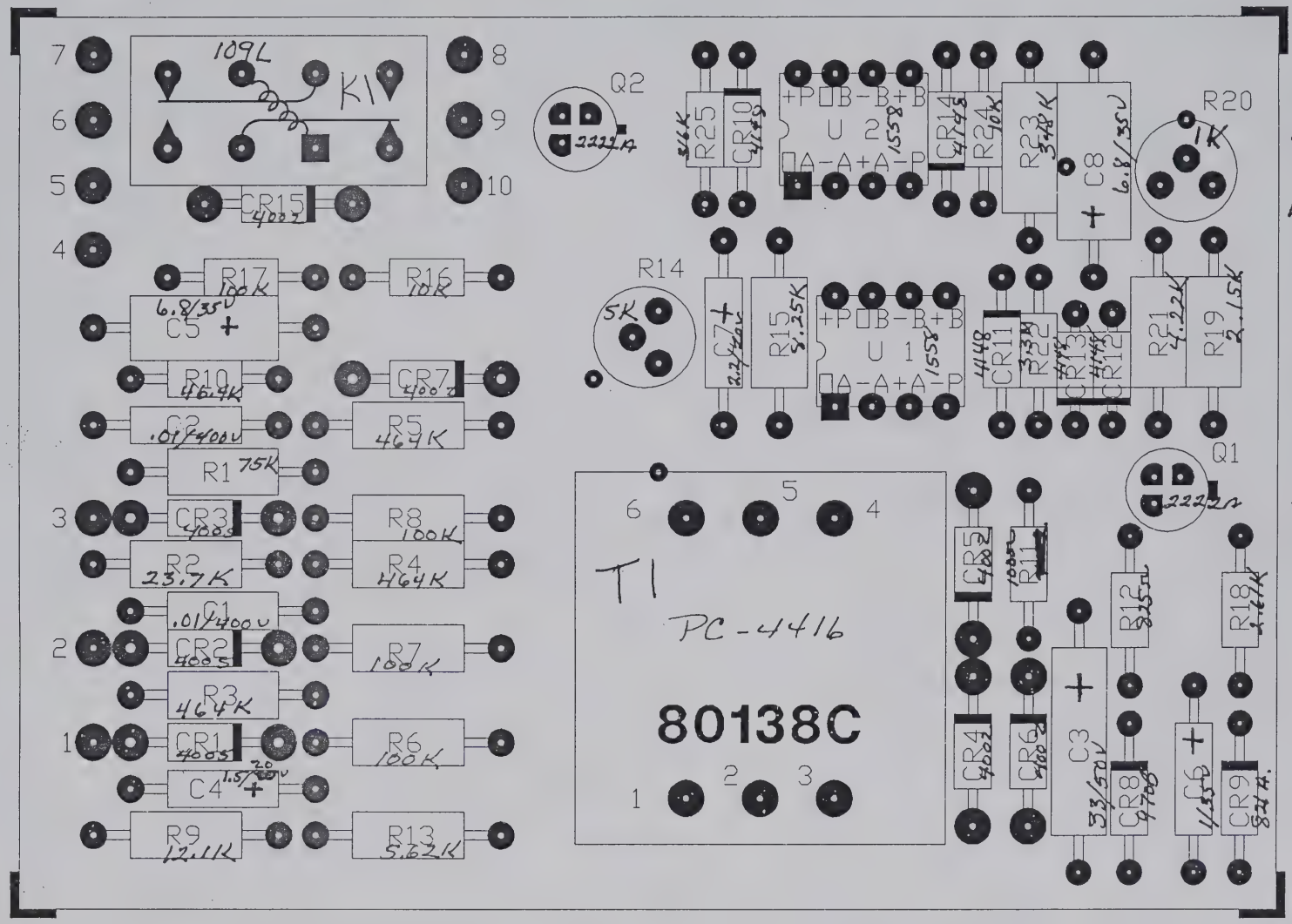
3 ASSEMBLY: 101537
2 SCHEMATIC: 101536
1 PARTS LIST: PL101535
NOTES:

DIMENSIONS ARE IN INCHES AND AFTER PLATING	DR	3-15-77	Parko ELECTRONICS COMPANY INC., SANTA ANA, CALIF.
TOLERANCES (unless otherwise specified) .X ±.1 .XX ±.03 .XXX±.010 ANGLES±0.5° MACH SURF √	CHK	6-16-77	SENSING RELAY- OVER-UNDER VOLTAGE & PHASE
	DSGN		
	PROJ		
	REL	7-25-77	
	APPROVED		CODE IDENT NO. 13979 / SIZE B / 101535 / REV
	APPROVED		
	DO NOT SCALE DRAWING		SCALE 1:1 / SHEET 1 OF

SENSING RELAY-OV-UV & PHASE

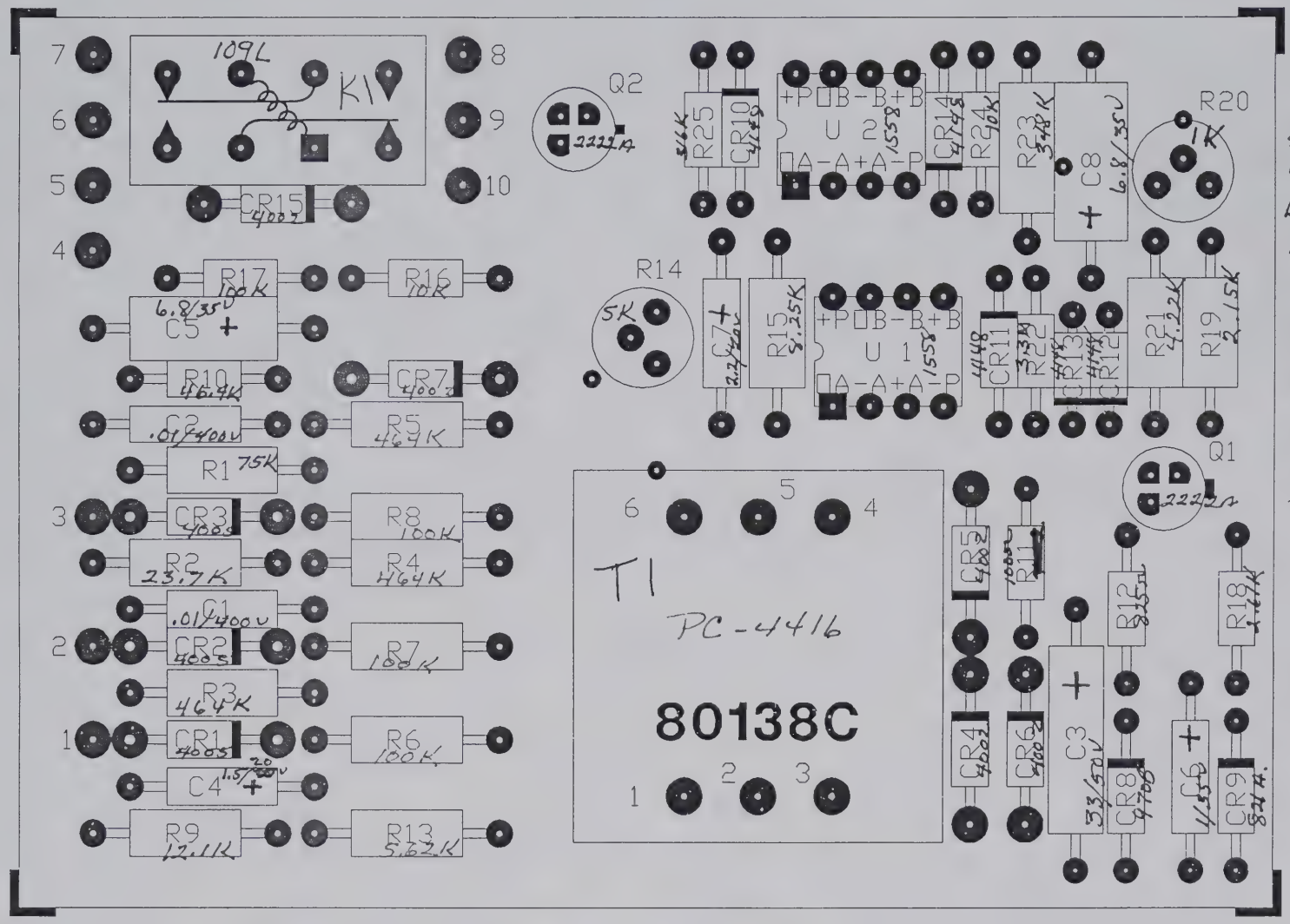
5-15

101537



Header
22 ga. Standard Wire.
Brown 2.0"
Red 1.5"
orange 1.3"
yellow 1.6"
green 1.5"
Blue 1.5"
Violet 1.6"
Gray 2.7"
White 2.6"
Black 2.5"

TOP DRAWING: 101535 PARTS LIST: PL101535 SCHEMATIC DWG. 101536 PC BOARD DWG: 80138C	TOLERANCES .X +/- 0.1 .XX +/- 0.03 .XXX +/- 0.010 ANGLES +/- 0.5	DRAWN: F. PARKER CHECK: G. LUCAS RELEASE: 05-10-95 APPROVED: F. PARKER APPROVED:	**Parko** ELECTRONICS CO. INC. SANTA ANA CA CAGE CODE 13979	ASSEMBLY DRAWING O/U ACV SENSING RELAY			
				SCALE: N/A	**101537**	REV NC	



Header

22 ga. Stranded wire.

Brown 2.0"
Red 1.5"
orange 1.3"
yellow 1.6"
green 1.5"
Blue 1.5"
Violet 1.6"
Gray 2.7"
White 2.6"
Black 2.5"

TOP DRAWING: 101535 PARTS LIST: PL101535 SCHEMATIC DWG. 101536 PC BOARD DWG: 80138C	TOLERANCES .X +/- 0.1 .XX +/- 0.03 .XXX +/- 0.010 ANGLES +/- 0.5	DRAWN: F. PARKER CHECK: G. LUCAS RELEASE: 05-10-95 APPROVED: F. PARKER APPROVED:	**Parko** ELECTRONICS CO. INC. SANTA ANA CA CAGE CODE 13979	ASSEMBLY DRAWING O/U ACV SENSING RELAY SCALE: N/A **101537** REV NC	



OUT OF PHASE SEQUENCE: [illegible]

TRIP POINT STABILITY: [illegible] ENVIRONMENTAL CONDITIONS.

TRIP POINT DIFFERENTIAL: [illegible] MAXIMUM.

CONTACT RATING: PER MIL-R-[illegible]

TEMPERATURE RANGE: -40°C to [illegible]

SHOCK: 50G FOR 11MS.

VIBRATION: [illegible]

INSULATION RESISTANCE: [illegible] MEGOHMS MIN. AT 500VDC, ALL PINS TO CASE.

DIELECTRIC STRENGTH: [illegible], 60 HZ. ALL PINS TO CASE.

MANUFACTURER PART NO.: [illegible]

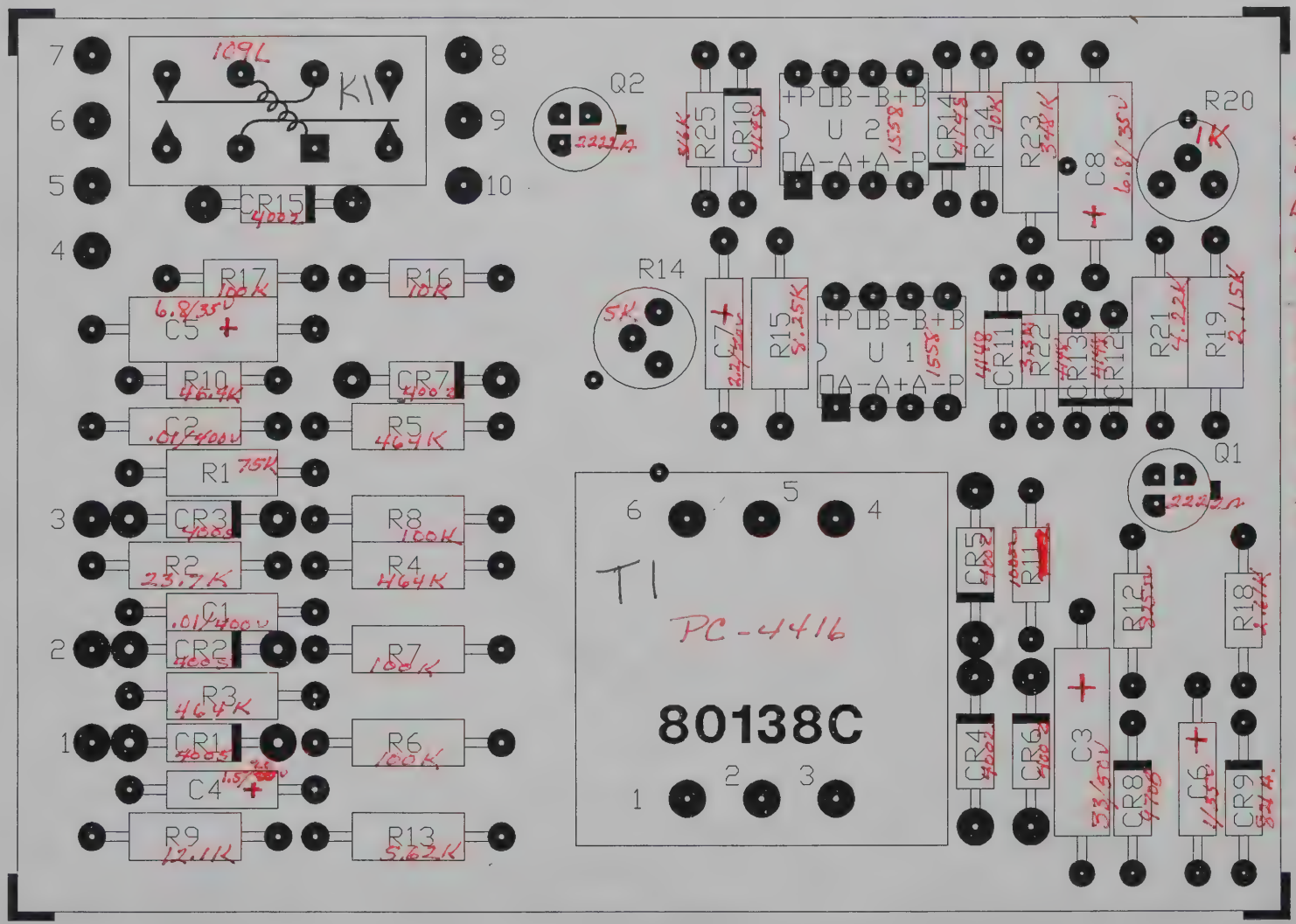
WEIGHT: 15 OZ. MAX.

TRIP TIME: FROM NOMINAL 3 PHASE [illegible] 151.8V OR 82.9V, THE TRIP TIME IS [illegible]

USE ON S.O 5254 12-18-95 ONLY

	DR [illegible]	[illegible]
	[illegible]	[illegible]
	APPROVED	12879

101535



Header:
22 ga. Standard wire.
Brown 2.0"
Red 1.5"
orange 1.3"
yellow 1.6"
green 1.5"
Blue 1.5"
Violet 1.6"
Gray 2.7"
White 2.6"
Black 2.5"

TOP DRAWING: 101535 PARTS LIST: PL101535 SCHEMATIC DWG. 101536 PC BOARD DWG: 80138C	TOLERANCES .X +/- 0.1 .XX +/- 0.03 .XXX +/- 0.010 ANGLES +/- 0.5	DRAWN: F. PARKER CHECK: G. LUCAS RELEASE: 05-10-95 APPROVED: F. PARKER APPROVED:	**Parko** ELECTRONICS CO. INC. SANTA ANA CA CAGE CODE 13979	ASSEMBLY DRAWING O/U ACV SENSING RELAY	
				SCALE: N/A	**101537** REV NC


ELECTRONICS CO., INC.
SENSING RELAY
1 PHASE
VOLTAGE 115 VAC 3Φ
CONTACT RATING 2 AMPS

NOTES:

1. PARTS LIST: PL10535
2. SCHEMATIC: 10536
3. ASSEMBLY: 10537

PIN CONNECTIONS

1	ΦA
2	ΦB
3	ΦC
4	NEUTRAL
5	K1-A1 (NO)
6	K1-A2 (COM)
7	K1-A3 (NC)
8	K1-B1 (NO)
9	K1-B2 (COM)
10	K1-B3 (NC)

SPECIFICATIONS:

1. INPUT POWER: 115V RMS, 400HZ, 3 PHASE, 4 WIRE SYSTEM. PHASE SEQUENCE: A,B,C.
2. NORMAL OPERATION: RELAY WILL PULL IN ONE SECOND ±10% AFTER APPLICATION OF NOMINAL POWER.
3. OVERVOLTAGE TRIP POINT: 138V RMS. RELAY DROPS OUT.
4. UNDERVOLTAGE TRIP POINT: 92V RMS. RELAY DROPS OUT.
5. OUT OF PHASE SEQUENCE: RELAY DROPS OUT.
6. TRIP POINT STABILITY: ±5% OVER ALL ENVIRONMENTAL CONDITIONS.
7. TRIP POINT DIFFERENTIAL 2% MAXIMUM.
8. CONTACT RATING: PER MIL-R-39016/6
9. TEMPERATURE RANGE: -40°C to $+85^{\circ}$C.
10. SHOCK: 50G FOR 11MS.
11. VIBRATION: 20G, 10-2000HZ.
12. INSULATION RESISTANCE: 100 MEGOHMS MINIMUM AT 500VDC. ALL PINS TO CASE.
13. DIELECTRIC STRENGTH: 1000V RMS, 60HZ MINIMUM. ALL PINS TO CASE.
14. CUSTOMER PART NO.: 71P7258-1

DIMENSIONS ARE IN INCHES AND AFTER PLATING	DR	3-15-77
	CHK	3-14-77
TOLERANCES (unless otherwise specified)	DSGN	
	PROJ	
.X ±.1	REL	1-25-77
.XX ±.03	APPROVED	
.XXX±.010	APPROVED	
ANGLES±0.5°	DO NOT SCALE DRAWING	
MACH SURF		

Parko
ELECTRONICS COMPANY INC., SANTA ANA, CALIF.

SENSING RELAY-
OVER-UNDER VOLTAGE & PHASE

CODE IDENT NO.	SIZE		REV
13979	B	10535	
SCALE 1:1		SHEET 1 OF 1	

SPECIFICATIONS:

1. [illegible]

NORMAL OPERATION: RELAY WILL PI
SECOND ±10% AFTER APPLICATION O

OVERVOLTAGE TRIP POINT: [illegible] V RMS.

OUT.

OUT OF PHASE SEQUENCE: RELAY DROPS O T.

TRIP POINT STABILITY: ±1% OVER ALL ENVIRON
MENTAL CONDITIONS.

CONTACT RATING: PER MIL-R-[illegible]

TEMPERATURE RANGE: -40°C to +[illegible]°C.

SHOCK: 50G FOR 11MS.

VIBRATION: 20G, 10-2000HZ.

INSULATION RESISTANCE: 100 MEGOHMS M
AT 500VDC. ALL PINS TO CASE.

DIELECTRIC STRENGTH: 1000V RMS., 60HZ MIN
ALL PINS TO CASE.

CUSTOMER PART NO.

15. WEIGHT: 15 OZ. MAX.

16. TRIP TIME: FROM NOMINAL 3 PHASE INPUT OF 115V TO 151.8V OR 82.8V, THE TRIP TIME SHALL BE 25 MS. TO 45 MS.

A

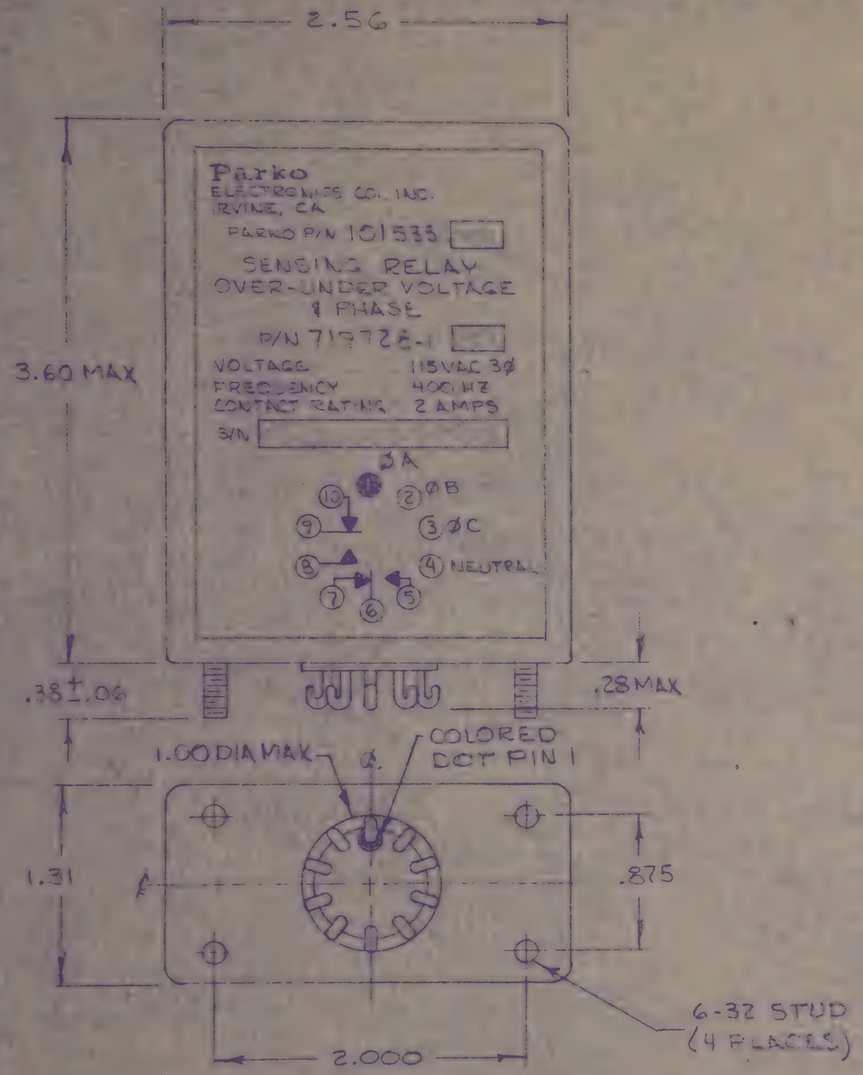
A-1-26-F)

15. WEIGHT: 15 OZ. MAX.

16. TRIP TIME: FROM NOMINAL 3 PHASE INPUT OF 115V TO 151.8V OR 82.8V, THE TRIP TIME SHALL BE 25 MS. TO 45 MS.

A

A- 1-26-7)





PIN CONNECTIONS

1	ØA
2	ØB
3	ØC
4	NEUTRAL
5	K1-A1 (NO)
6	K1-A2 (ARM)
7	K1-A3 (NC)
8	K1-B1 (NO)
9	K1-B2 (ARM)
10	K1-B3 (NC)

SPECIFICATIONS:

1. INPUT POWER: 115V RMS, 400HZ, 3 PHASE, 4 WIRE SYSTEM. PHASE SEQUENCE: A, B, C.
2. NORMAL OPERATION: RELAY WILL PULL IN ONE SECOND ±10% AFTER APPLICATION OF NOMINAL POWER.
3. OVERVOLTAGE TRIP POINT: 138V RMS. RELAY DROPS OUT.
4. UNDERVOLTAGE TRIP POINT: 92% RMS. RELAY DROPS OUT.
5. OUT OF PHASE SEQUENCE: RELAY DROPS OUT.
6. TRIP POINT STABILITY: ±1% OVER ALL ENVIRONMENTAL CONDITIONS.
7. TRIP POINT DIFFERENTIAL 2% MAXIMUM.
8. CONTACT RATING: PER MIL-R-39016/6
9. TEMPERATURE RANGE: -40°C to +85°C.
10. SHOCK: 50G FOR 11MS.
11. VIBRATION: 20G, 10-2000HZ.
12. INSULATION RESISTANCE: 100 MEGOHMS MINIMUM AT 500VDC. ALL PINS TO CASE.
13. DIELECTRIC STRENGTH: 1000V RMS, 40HZ MINIMUM. ALL PINS TO CASE.
14. CUSTOMER PART NO.: 719728-1
15. WEIGHT: 15 OZ. MAX.
16. TRIP TIME: FROM NOMINAL 3 PHASE INPUT OF 115V TO 151.8V OR 82.8V, THE TRIP TIME SHALL BE 25 MS. TO 45 MS.

ENG. COPY

3 ASSEMBLY: 101537( )
2 SCHEMATIC: 101536( )
1 PARTS LIST: PL101535( )
NOTES:

DIMENSIONS ARE IN INCHES AND AFTER PLATING	DR		3-15-77
TOLERANCES (unless otherwise specified) .X ±.1 .XX ±.03 .XXX±.010 ANGLES±0.5°	CHK		6-14-77
	DSGN		
	PROJ		
	REL		
MACH SURF ✓	APPROVED		
	APPROVED		
	DO NOT SCALE DRAWING		

Parko
ELECTRONICS COMPANY INC., SANTA ANA, CALIF.

SENSING RELAY:
OVER-UNDER VOLTAGE 3 PHASE

CODE IDENT NO.	SIZE	
13979	B	101535

SCALE [ ] SHEET 1 OF 1

Rcvd 12/20/86

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
-	Released	77-03-23	T. Stark
A	ADDED LEACH		
B	SH 2, FIG 1, DIM. .335 MAX WAS .28 MAX.	83-10-6	F. Bao
C	SH 1, DELETED LEACH CORP. SH 3, NOTE 10 WAS "CONTACT RATING" IS "TRIPTIME." NOTES 11 THRU 19 WERE 10 THRU 18. SH 4 ADDED TO INCLUDE FIG 2.	84-12-17	K.C JONES

PART IDENT NUMBER	SUPPLIER PART NUMBER	SUPPLIER, ADDRESS & FSCM NO.
719728-1	101535	PARKO ELECTRONICS CO. INC., IRVINE., CAL FSCM 13979
~~719728-1~~	~~VS479~~	~~LEACH CORP. LOS ANGELES, CA. FSCM 35343~~

STANDARD GSG GSG RELEASE

SPECIFICATION CONTROL DRAWING

PREPARED IN ACCORDANCE WITH MIL-STD-100A

INTERPRET DRAWING IN ACCORDANCE WITH MIL-D-1000, CATEGORY F, FORM 3

EXCEPT AS NOTED DIM. ARE IN INCHES AND PER ANS Y14.5
.XXX ±.010 .XX ±.03 ANGLES —

MATERIAL.

DR 77-3-23

CHK R. ALLEN

APPD 77-3-29

HUGHES

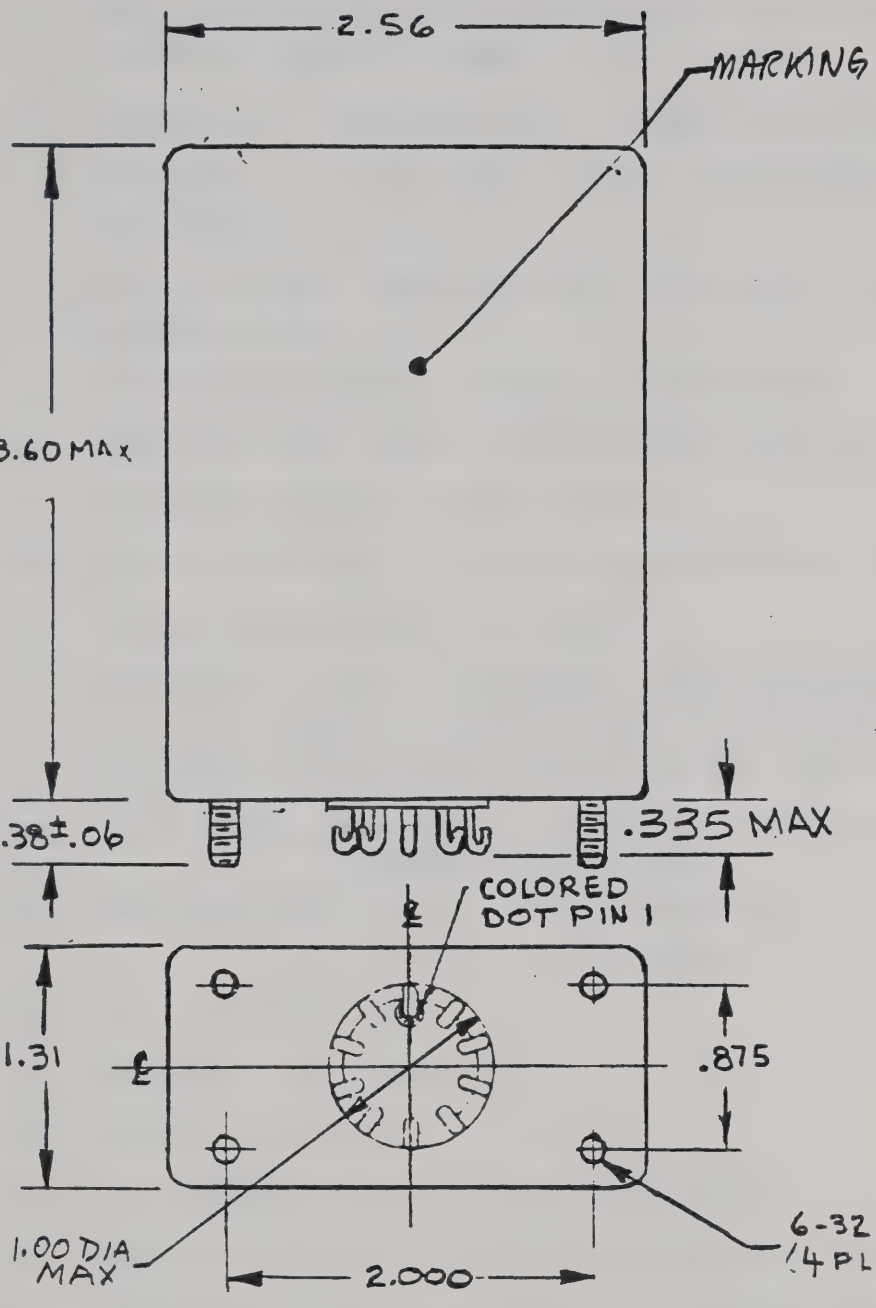
HUGHES AIRCRAFT COMPANY
FULLERTON, CALIFORNIA

RELAY, SENSING
(OVER-UNDER VOLTAGE)

SIZE	CODE IDENT NO.	DRAWING NO.	REV.
A	05869	719728	C

SCALE NONE SHEET 1 OF 4

D14-338 GS 4/72





FEOP

PIN CONNECTIONS

1	Ø A
2	Ø B
3	Ø C
4	NEUTRAL
5	K1-A1 (NO)
6	K1-A2 (ARM)
7	K1-A3 (NC)
8	K1-B1 (NO)
9	K1-B2 (ARM)
10	K1-B3 (NC)

FIGURE 1: OUTLINE, MOUNTING & PIN CONNECTIONS

HUGHES AIRCRAFT COMPANY FULLERTON, CALIFORNIA	CONTRACT:			
DR 77-3-23	SIZE A	FSCM NO. 05869	DWG NO. 719728	REV C
ISSUED 77-03-29	SCALE			SHEET 2

719728 | 3 | C

NOTES:

1. PARTS SUPPLIED UNDER THIS DOCUMENT SHALL BE CAPABLE OF MEETING THE REQUIREMENTS SPECIFIED HEREIN.
2. CONSTRUCTION: SEALED METAL CASE; INTERNAL RELAY PER MIL-R-39016
3. INPUT POWER: 115V RMS, 400HZ, 3 PHASE, 4 WIRE SYSTEM.
   PHASE SEQUENCE: A, B, C.
4. NORMAL OPERATION: RELAY WILL PULL IN ONE SECOND ± 10% AFTER APPLICATION OF NOMINAL POWER.
5. OVERVOLTAGE TRIP POINT: 138V RMS. RELAY DROPS OUT.
6. UNDERVOLTAGE TRIP POINT: 92V RMS. RELAY DROPS OUT.
7. OUT OF PHASE SEQUENCE: RELAY DROPS OUT.
8. TRIP POINT STABILITY: ± 5% OVER ALL ENVIRONMENTAL CONDITIONS.
9. TRIP POINT DIFFERENTIAL: 2% MAXIMUM.
10. TRIP TIME: WITH A VARIATION OF VOLTAGE FROM NOMINAL (115V) TO 10% ABOVE THE MAXIMUM TRIP POINT (151.8) OR FROM NOMINAL (115V) TO 10% BELOW THE MINIMUM TRIP POINT (82.8), THE TRIP TIME SHALL BE 25 TO 45 MILLISECONDS.
11. CONTACT RATING; RESISTIVE: 2A AT 28VDC, .3A AT 115VAC
    INDUCTIVE: .75A AT 28VDC
12. TEMPERATURE RANGE: -45°C to +85°C, OPERATING
    -56°C to +71°C, STORAGE
13. SHOCK: 50G FOR 11MS.
14. VIBRATION: 20G, 10-2000HZ.
15. HUMIDITY: TO 100%.
16. SALT ATMOSPHERE: SHALL NOT AFFECT PERFORMANCE.
17. INSULATION RESISTANCE: 100 MEGOHMS MINIMUM AT 500VDC. ALL PINS TO CASE.
18. DIELECTRIC STRENGTH: 1000V RMS, 60Hz, MINIMUM. ALL PINS TO CASE.
19. MARKING: PER MIL-STD-130; WITH MANUFACTURERS NAME OR SYMBOL AND PART NUMBER.

HUGHES AIRCRAFT COMPANY FULLERTON, CALIFORNIA	CONTRACT:			
DR 77-3-23	SIZE A	FSCM NO. 05869	DWG NO. 719728	REV C
ISSUED 77-03-29	SCALE			SHEET 3

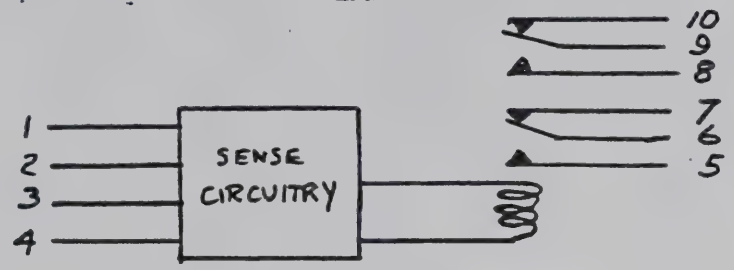


FIG 2: SCHEMATIC (UNENERGIZED CONDITION)

HUGHES AIRCRAFT COMPANY FULLERTON, CALIFORNIA	CONTRACT:			
	SIZE	FSCM NO	DWG NO	REV
	A	05869	719728	C
DWN K.C. JONES				
84-12-17	SCALE		SHEET 4	

Parko

ELECTRONICS COMPANY, INC. IRVINE CALIFORNIA

FUNCTIONAL INSPECTION RECORD

DATE _____ **SHOP ORDER** _____ **ENG. SPEC.** ES 1535A

PARKO P/N 101535(A) Sensing Relay **CUSTOMER P/N** HF 719728-1 (C)

CUSTOMER AND P.O. NO. _____

SERIAL NUMBER	Dielectric Strength All pins to case 1000 VRMS 60 HZ min	Insulation Resistance All pins to case 100 Megohms 500 VDC min	Nominal Operation Relay pulls in Check contacts	Phase Sequence Test Relay drops out if other than A,B,C

Parko

ELECTRONICS COMPANY, INC. IRVINE CALIFORNIA

FUNCTIONAL INSPECTION RECORD

DATE _____ **SHOP ORDER** _____ **ENG. SPEC.** ES 1535A

PARKO P/N 101535(A) Sensing Relay **CUSTOMER P/N** HF 719728-1 (C)

CUSTOMER AND P.O. NO. _____

SERIAL NUMBER	Dielectric Strength All pins to case 1000 VRMS 60 HZ min	Insulation Resistance All pins to case 100 Megohms 500 VDC min	Nominal Operation Relay pulls in Check contacts	Phase Sequence Test Relay drops out if other than A,B,C

Parko

ELECTRONICS COMPANY, INC. IRVINE CALIFORNIA

FUNCTIONAL INSPECTION RECORD

DATE _____ **SHOP ORDER** _____ **ENG. SPEC.** ES 1535A

PARKO P/N 101535(A) Sensing Relay **CUSTOMER P/N** HF 719728-1 (C)

CUSTOMER AND P.O. NO. _____

SERIAL NUMBER	MUST BE ADJUSTED FIRST. Overvoltage Trip Point Relay drops out All phases to 138VRMS ± 2V	Reset Differential 2.7 VRMS MAX		Undervoltage Trip Point Relay drops out All phases to 92VRMS ± 2V	Reset Differential 1.8 VRMS MAX	
		ACTUAL	RESET DIFF		ACTUAL	RESET DIFF

Parko

ELECTRONICS COMPANY, INC, SANTA ANA CALIFORNIA

FUNCTIONAL INSPECTION RECORD

DATE _____ **SHOP ORDER** _____ **ENG. SPEC.** ES 1535A

PARKO P/N 101535(A) SENSING RELAY **CUSTOMER P/N** HF 719728-1 (C)

CUSTOMER AND P.O. NO. _____

SERIAL NUMBER	NOMINAL POWER-UP TIME DELAY 0.90 SEC TO 1.10 SEC.		TRIP TIMING	
			3 PHASES FROM 115V TO 151.8V 25 TO 45 MS	3 PHASES FROM 115V TO 82.8V 25 TO 45 MS



MADE IN LOS ANGELES

STOCK NO. 113